

**1994 AP[®] Psychology:
Free-Response Scoring Guide
with Multiple-Choice Section**



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The Advanced Placement Examination in Psychology

- **The Entire 1994 Examination and Answer Key**
 - **Sample Student Responses**
 - **Statistical Information**

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THE COLLEGE BOARD: EDUCATIONAL EXCELLENCE FOR ALL STUDENTS

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Welcome from the Advanced Placement Program

The Advanced Placement Program is almost 40 years old, and since its creation by the College Board in 1955 it has offered more than 7 million examinations to nearly 5 million candidates around the world. These candidates are usually high school juniors or seniors who have taken an AP or equivalent college-level course while still in secondary school.

Students participate in the AP Program for several reasons. Some enjoy the opportunity to be challenged academically while still in high school. Others appreciate the chance to be exempt from an introductory course once in college. Whatever the reason, participation in the AP Program provides an academically stimulating situation; it can also save a student money and time in college.

The validity and reliability of the AP Program are widely acknowledged. AP grades are now recognized by more than 3,100 two- and four-year colleges and universities both in and outside of the United States. These institutions offer advanced placement, course credit, or both to students who have successfully completed AP Exams. In addition, almost 1,500 of these institutions grant sophomore standing to students who have demonstrated their competence in three or more exams.

The AP Program is more than just examinations, however. It also actively promotes college-level instruction at the high school level, specifically in the form of AP courses, faculty workshops, and associated publications. The College Board periodically monitors college-level courses throughout the nation to ensure that AP courses reflect the best college instruction. Every summer the Board holds workshops for AP teachers from the more than 10,000 high schools that offer AP courses and examinations. Finally, the Board has made available almost 300 publications containing information and data about the Program's products and services.

In this publication we present to you the 1994 AP Psychology Examination and its scoring standards. We have found that one of the best ways to become familiar with AP-level material and to optimize preparation for an AP Exam is to see what has appeared on prior exams, how students responded to the questions, and why the faculty consultants scored those responses the way they did. We hope this publication will be useful to you, and we wish you the best of luck in your teaching endeavors.



Walt MacDonald
Director
Advanced Placement Program

Chapter I

Introduction

The Advanced Placement Program of the College Board aims to improve the nation's quality of education and to facilitate students' transition from secondary school to college. Through its committees of educators, the Program provides course descriptions and examinations in 16 disciplines so that secondary schools may offer their students the stimulating challenge of college-level study culminating in an exam that measures college-level achievement.

■ DEVELOPING THE PSYCHOLOGY EXAM

At least two years are generally needed to develop each Advanced Placement Examination. In the case of AP Psychology, the process starts when the College Board, working with test development specialists at Educational Testing Service (ETS), appoints a Psychology Development Committee composed of five teachers from secondary schools, colleges, and universities in different parts of the country. Committee members typically serve for a period of three years. The chief faculty consultant in Psychology serves *ex officio* on the committee and attends all meetings.

Committee members, as well as other college and secondary school teachers, independently write and prepare questions for both the multiple-choice and free-response sections of the examination. The committee members then receive copies of all submissions for review and revision.

At the committee meetings, which are held twice a year, each question is carefully considered as to its appropriateness, level of difficulty in comparison to questions from previous years, and ability to distinguish gradations of achievement. The committee members who are AP high school teachers offer valuable advice regarding realistic expectations when matters relating to coverage of material, knowledge of terms, and clarity of phrasing are addressed. The college and university faculty members contribute their own per-

spectives, ensuring that the questions that are approved and accepted are at the appropriate level of difficulty for an introductory college course in psychology. The committee is responsible for selecting questions and ensuring their accuracy. The chief faculty consultant considers any difficulties that might interfere with the reliable scoring of a question. Educational Testing Service consultants provide advice and guidance, and other ETS consultants are involved in the review process.

When the review process has been completed, the questions that remain are assembled according to test specifications and, after further editing and checking, compose the AP Examination.

■ GRADING STANDARDS

Every May, hundreds of thousands of students from around the world take one or more of the 29 AP Examinations offered. In all subjects except Studio Art, the exams contain both multiple-choice questions and free-response questions, the latter requiring essay writing and problem solving.

Grading AP Examinations is a unique enterprise: the size and complexity of the Reading are unlike those of any other essay assessment in this country; the evaluation requires special and demanding procedures designed to produce equitable and consistent evaluations of performance. While the multiple-choice sections of the exams are scored by computer, the free-response sections require the involvement of about 2,800 college professors and AP teachers who have been carefully selected on the basis of their education, experience, and association with the AP Program. Several hundred thousand examinations containing more than three million student answers are evaluated. In addition, several hundred individuals provide professional and clerical support at the three or more sites required to accommodate the six-day Reading.

While pride in accomplishing this undertaking is justifiable, the essential concern of the Advanced Placement Program is that all students receive grades that demonstrate their achievement fairly and accurately. Thus, the following procedures are used to assure that grading standards are applied fairly to all student responses.

■ **The conscientious development of scoring standards.** The preparation of standards for an examination begins when the Development Committee reviews and approves the examination, which may occur as early as two years before the Reading. After the exam has been administered, the standards are refined by faculty consultants who have experience working with actual candidate answers.

■ **The use of carefully developed scoring scales.** Each question has an associated scoring scale — generally from 0 to 5 or 0 to 9 — designed to allow faculty consultants to make distinctions among answers. The scales avoid the problem of too few points, which allows only coarse distinctions, and the problem of too many points, which requires overly refined, often meaningless distinctions. Because the standards and their accompanying scales are tailored to individual questions, they allow each answer to be appropriately ranked.

■ **The rigorous review of the scoring standards and their internalization by all AP faculty consultants.** Three to seven hours at the Reading are devoted to reviewing the standards and making sure that they are applied consistently. The objective is to meld two essential components: (1) each faculty consultant's professional assessment of the answers, and (2) the scoring standards developed by the Reading group. In this way, student responses are accurately and uniformly assessed.

■ **Minimization of the possibility of the "halo effect."** The "halo effect" (giving an answer a higher or lower grade than it deserves because of good or poor impressions of other answers by the same student) is minimized by following three practices: (1) having each question read by a different faculty consultant, (2) completely masking all scores given by other faculty consultants, and (3) concealing the candidate's identification information. Using these practices permits each faculty consultant to evaluate

essay answers without being prejudiced by knowledge about individual candidates.

■ **The close monitoring of scoring standards.** Scoring standards are developed and monitored using a variety of methods that minimize the chances that students would receive different grades if their answers were read by different faculty consultants. One method is to have a second faculty consultant independently score responses that have been previously read; another method is to have the faculty consultant reread exams that he or she has previously read. In either instance, if there is too great a disparity between the resulting scores, the individuals involved resolve the differences. These are just two of the methods used to maintain the scoring standards. Taken as a whole, the procedures ensure that all candidates receive an accurate estimate of their demonstrated achievement on the AP Examination.

■ EXAMINATION STANDARDS

Each year's Advanced Placement Psychology Examination contains a 75-minute multiple-choice section and a 45-minute free-response section. The sections are designed to complement each other and to meet the overall course objectives and examination specifications. The exam would not be able to evaluate the full range of a student's abilities without the use of both (see the AP Course Description in Psychology for complete information; an order form for the Course Description is included at the back of this guide). The multiple-choice format is appropriate for assessing a student's knowledge of significant psychological research findings and the definition and application of major psychological concepts; the free-response format provides better assessment of the student's mastery of scientific research principles and ability to make connections among constructs from different psychological domains (e.g., development, personality, learning).

The AP Psychology Exam, first offered in 1992, contains two free-response questions. The first question has focused either on the scientific method or principles of conditioning. The second question has been more integrative, requiring students to analyze a general problem in psychology (e.g., depression, adaptation) using concepts from different theoretical frameworks or different subdomains within the field.

The multiple-choice questions have the unique ability to cover the breadth of a curriculum. They have three other strengths: high reliability, controlled level of difficulty, and the possibility of establishing comparability with earlier examinations. Reliability, or the likelihood that candidates taking different forms of the examination will receive the same scores, is controlled more effectively with multiple-choice questions than with free-response questions.

Maintaining a specified distribution of questions at appropriate levels of difficulty ensures that the measurement of differences in students' achievement is optimized. For AP Examinations, the most important distinctions among students are between the grades of 2 and 3, and 3 and 4. These distinctions are usually best accomplished by using many questions of middle difficulty.

Comparability of scores on the multiple-choice section of a current and a previous examination is provided by incorporating a given number of items from an earlier examination within the current one, thereby allowing comparisons to be made between the scores of the earlier group of candidates and the current group. This information is used, along with other data, by the chief faculty consultant to establish AP grades that reflect the competence demanded by the Advanced Placement Program and that compare with earlier grades.

■ STUDENT PREPARATION

The free-response questions on the AP Psychology Exam are designed to address both basic and applied aspects of the field. They allow students to demonstrate their mastery of the scientific method, their recognition of the existence of competing paradigms within psychology, and their ability to apply basic psychological principles to a variety of problems within the field.

Faculty consultants believe that the free-response questions should not be answerable on the basis of just one chapter in a textbook or just one lecture; rather, they should require an understanding that bridges several different contexts within psychology. Specific identification of the components of the scientific method (e.g., independent variable, dependent variable, controls) may be required, but, more importantly, the students should be able to apply their general knowledge to particular problems that they may not have studied in great detail. Students should avoid giving

answers in an outline format, and instead, develop a coherent argument or explanation concerning the problem presented.

In all cases, it is important that students read the question carefully and direct their answers specifically to the question. Students are expected to be explicit in their use of psychological constructs and to be specific both in their reference to and discussion of psychological principles or problems, citing evidence and examples to illustrate their explanations. The faculty consultants especially look for and reward students' capacity to incorporate in their analysis correctly used psychological vocabulary. Students should also be advised that restating the question at the beginning of the essay adds nothing to its value. Similarly, it is a waste of their time to provide tangential information that may be correct, but is irrelevant to the question. Finally, faculty consultants urge psychology teachers to review the APA ethical principles when teaching their students about the research process. Many of the 1994 students showed a dismaying lack of concern with ethical issues.

Students will be best prepared for writing their examination essays by being given a variety of opportunities to answer free-response questions during the academic year. Assignments might include designing and critiquing psychological studies, writing research papers that require a critical analysis of published studies of an issue, and analyzing essay questions that require comparison and contrast of theories or studies.

Samples of student writing from the AP Exam, the scoring guides used at the Reading by faculty consultants to evaluate student performance on the essays, and the rationales explaining why each sample essay received the score it did are routinely provided with published examinations, such as the 1994 AP Psychology Examination offered here. Sample multiple-choice and essay questions are also published in each year's edition of the Advanced Placement Course Description for a given subject. The free-response section of each examination is released to the public after the examinations have been given in May.

Other materials available for teachers of AP Psychology courses include: the *Teacher's Guide to the AP Course in Psychology*. This publication provides information for teaching an Advanced Placement course, sample high school and college curricula, and an extensive bibliography. To order this or any other AP publication, please use the order form at the back of this book.

Chapter II

The 1994 AP Psychology Examination

OVERVIEW

This publication contains the entire 1994 AP Psychology Examination: Section I (multiple-choice) and Section II (free-response). The format of this year's examination was identical to the format used in the past two years.

Section I, composed of 100 objective questions, assesses the breadth of a student's knowledge. The questions cover the 13 areas of scientific psychology described in the Advanced Placement Course Description in Psychology. In some questions, students are asked to demonstrate their understanding of a psychological term, e.g., genotype, echoic memory, mania, phonemes. In others they are asked to apply concepts from a particular psychological theory, e.g., Kohlberg's theory of moral judgment, attribution theory, or to identify the theoretical framework with which a given explanation is associated, e.g., an explanation of depression in terms of norepinephrine levels. Other questions are designed to assess general understanding of the scientific method as well as knowledge of findings from major research studies or areas of study.

The free-response section of the examination asks students to apply their understanding of psychological principles and research to major issues in psychology and to integrate their mastery of concepts across several subdomains within the field. In 1994, Question 1 required students to design an experiment to test the efficacy of a drug intended to reduce hyperactivity in children. Students were directed to identify and describe five specific components of their experimental design (sampling, independent variable and dependent variable, controls, and the method they would employ to evaluate the outcome). In the overall scoring of the essay, each of these five components was worth 2 points — one for identification and one for description — for a possible total score of 10.

The second free-response question, scored on an 11-point scale, required students to explain the psychological generalization that "behavior is adaptive," for 1 point, and then identify five psychological processes (repression, conformity, imprinting, displaced aggression, and loss of information from short-term memory) and describe how each could be adaptive, for a further possible 10 points. Eleven points, the highest possible score, could be earned only if the student correctly explained adaptation as well as correctly listed each of the five processes and how each could be adaptive.

Chapter III contains the scoring guides used to grade the essays, as well as sample student responses representing the high and middle ranges of the scoring scales.

Examination Structure

The number of questions in each section of the 1994 AP Psychology Examination, and the time allowed to administer them, were as follows:

Multiple-Choice (Section I)

100 questions* 75 minutes

Free-Response (Section II)

2 essay questions** 45 minutes

*Of the 100 questions in the first section, two were eliminated after the exam was administered (see Chapter III for an explanation of why the questions were not scored).

**The first essay question was graded on a 0 to 10 point scale (10 being the top score), and the second question was graded on a 0 to 11 point scale (11 being the top score).

■ THE RELEASED EXAM

The following pages contain the instructions, as printed in the 1994 *AP Coordinator's Manual*, for administering the AP Psychology Examination. Following the instructions is a copy of the actual 1994 AP Psychology Examination. If you use this released exam to test your students, you may wish to use these instructions

and thus create an exam situation that resembles a national administration.

Read aloud to the students the directions that are shaded and set in boldface. All other instructions are for the person administering the exam and need not be read aloud. You will find that some instructions — such as those referring to the date, the time, and page numbers — are no longer relevant; please ignore them.

■ INSTRUCTIONS FOR ADMINISTERING THE EXAM (from the 1994 Coordinator's Manual)

After completing the general instructions that begin on page 26, say:

It is Wednesday afternoon, May 11, and you will be taking the AP Psychology Exam. Please print your name, last name first, on the front cover of the white Section I booklet. . . . Now read the directions on the back of the booklet. When you have finished, look up. . . . Now look over your answer sheet carefully and check to see that you have provided the information requested and marked your responses correctly. . . . Because your answer sheet will be scored by machine, remember that improper gridding of your answer sheet may alter your grade. Use *only* no. 2 pencils to mark your answers on Section I. Mark all your responses on side 1 of your answer sheet (one response per question). Be certain that the number of the question you are answering matches the number on the answer sheet. Make sure that each of your answer marks is dark and fills the oval completely. Because stray marks and smudges may be read as answers by the machine, erase carefully and completely.

You are to work only on Section I until time is called. Do not open the sealed Section II booklet until you are told to do so. Remember that when you come to the end of the multiple-choice questions in Section I, there will still be answer ovals left on your answer sheet. Are there any questions?

Answer all questions regarding procedure. Set your watch at 12:59. When it reads exactly 1:00, say:

Open your white Section I booklet and begin work.

While the candidates are working on Section I, you and your proctors should make sure that they are marking answers on their answer sheets in pencil and are not looking at their Section II booklets.

—AT 2:15—

Please stop working. Close your exam booklet and keep it closed on your desk. Check to see that you printed your name, last name first, on the front

cover of your white booklet. . . . Please do *not* insert your answer sheet in the white booklet. I will now collect the answer sheets.

After you have collected an answer sheet from every candidate, say:

Please seal the white booklet shut with the three seals provided. Pull off each seal from the backing sheet, press it on the front cover so it just covers the area marked "PLACE SEAL HERE," fold it over the open edge, and press it to the *back* cover. Use one seal for each open edge. Be careful not to let the seals touch anything except the marked areas. . . .

Collect the sealed Section I exam booklets. After you have collected a sealed booklet from every candidate, say:

Turn to the back cover of the sealed pink Section II booklet, and read the instructions at the upper left. . . . Print identification information in the boxes, using a pen with black or dark-blue ink. . . . Next, taking care not to tear the pink sheet beneath the cover, detach the two perforated sides at the top. . . . Fold the flap down, and moisten and press the glue strip firmly along the entire lower edge. . . . Your identification information should be covered now and will not be known by those scoring your answers.

Read the instructions at the upper right of the back cover. Print your initials in the three boxes provided. . . . Next, take two AP number labels from your Candidate Pack and place the numbers in the two bracketed areas, one below the instructions and one to the left. If you don't have number labels left, carefully copy your number from the back cover of your Candidate Pack within both of the bracketed areas. . . . Item 6 provides you with the option of giving permission to Educational Testing Service to use your free-response materials for educational research and instructional purposes. Your name would not be used in any way in connection with the free-response materials. Please read the statement and answer either "yes" or "no." . . . Are there any questions?

PSYCHOLOGY EXAMINATION

Answer all questions regarding procedure. Then say:

If you will be taking another AP Examination, I will now collect your Candidate Pack. You may keep your Candidate Pack if this is your last or only AP Examination.

Collect the Candidate Packs. Then say:

Read the directions for Section II on the back of your pink booklet. Please look up when you have finished. . . . Are there any questions?

Answer all questions regarding procedure. Then say:

You have 45 minutes to answer the two questions in Section II. It is suggested that you divide your time approximately equally between the two questions. You may answer either of the questions first. Be sure to write down in the pink booklet the number of the question you are answering. At the end of 20 minutes you will be advised that you have 25 minutes left. The announcement is a reminder only; you are responsible for pacing yourself.

Answer all questions regarding procedure. Set your watch at 2:14. When it reads exactly 2:15, say:

Open the pink booklet. Carefully tear out the green insert. You may use the green insert for notes, but

write all your answers in the pink booklet. . . . Begin work on Section II.

You and your proctors should check to be sure that all candidates are writing their answers in the pink Section II booklets.

—AT 2:35—

Twenty minutes have passed. You have 25 minutes left to complete the two essays.

—AT 3:00—

Please stop working. Close your pink booklet and keep it closed on your desk. I will now collect your pink booklets. Please remain in your seats, without talking, while the exam materials are being collected.

Collect the pink booklets. Be sure you have one from every candidate, and check the back of each pink booklet to see that the candidate's AP number appears in the two boxes. Note that the students' green inserts should be collected if the exam will be administered late to any candidate. If there will be no late administration, the students may keep the green inserts. When all the exam materials have been collected, you may dismiss the candidates.

Fill in the necessary information for the Psychology Examination on the S&R Form. Then put the exam materials in locked storage until they are returned to ETS in one shipment after your school's last administration. See "Activities After the Exam Administration."

PSYCHOLOGY

Two hours are allotted for this examination: 1 hour and 15 minutes for Section I, which consists of multiple-choice questions; and 45 minutes for Section II, which consists of essay questions. Section I is printed in this examination booklet; Section II essay questions are printed in a separate green insert.

SECTION I

Time — 1 hour and 15 minutes

Number of questions — 100

Percent of total grade — $66\frac{2}{3}$

This examination contains 100 multiple-choice questions. Therefore, please be careful to fill in only the ovals that are preceded by numbers 1 through 100 on your answer sheet.

General Instructions

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE INSTRUCTED TO DO SO.

INDICATE ALL YOUR ANSWERS TO QUESTIONS IN SECTION I ON THE SEPARATE ANSWER SHEET. No credit will be given for anything written in this examination booklet, but you may use the booklet for notes or scratchwork. After you have decided which of the suggested answers is best, COMPLETELY fill in the corresponding oval on the answer sheet. Give only one answer to each question. If you change an answer, be sure that the previous mark is erased completely.

Example:

Chicago is a

- (A) state
- (B) city
- (C) country
- (D) continent
- (E) village

Sample Answer

(A) ● (C) (D) (E)

Many candidates wonder whether or not to guess the answers to questions about which they are not certain. In this section of the examination, as a correction for haphazard guessing, one-fourth of the number of questions you answer incorrectly will be subtracted from the number of questions you answer correctly. It is improbable, therefore, that mere guessing will improve your score significantly; it may even lower your score, and it does take time. If, however, you are not sure of the best answer but have some knowledge of the question and are able to eliminate one or more of the answer choices as wrong, your chance of getting the right answer is improved, and it may be to your advantage to answer such a question.

Use your time effectively, working as rapidly as you can without losing accuracy. Do not spend too much time on questions that are too difficult. Go on to other questions and come back to the difficult ones later if you have time. It is not expected that everyone will be able to answer all the multiple-choice questions.

PSYCHOLOGY

SECTION I

Time—1 hour and 15 minutes

100 Questions

Directions: Each of the questions or incomplete statements below is followed by five suggested answers or completions. Select the one that is best in each case and then fill in the corresponding oval on the answer sheet.

1. The painful experience associated with termination of the use of an addictive substance is known as
 - (A) discontinuance
 - (B) tolerance
 - (C) withdrawal
 - (D) forced independence
 - (E) transduction
2. When parents refuse to accept several psychologists' diagnosis of a child's mental illness, they are using which of the following defense mechanisms?
 - (A) Denial
 - (B) Displacement
 - (C) Projection
 - (D) Rationalization
 - (E) Regression
3. After several trials during which a dog is given a certain kind of food at the same time that a specific tone is sounded, there is evidence of conditioning if the dog salivates when
 - (A) the tone only is presented
 - (B) the food only is presented
 - (C) the food and tone are presented together
 - (D) a different tone is presented with the food
 - (E) a different kind of food is presented without a tone
4. A complex pattern of organized, unlearned behavior that is species-specific is called
 - (A) a drive
 - (B) a need
 - (C) a motive
 - (D) an emotion
 - (E) an instinct
5. Which of the following correctly describes the firing of neurons?
 - (A) A protoplasmic transfer of ions
 - (B) A finely graded response
 - (C) An all-or-none response
 - (D) An osmotic process
 - (E) A symbiotic function
6. Distrust of others is symptomatic of
 - (A) mania
 - (B) dementia
 - (C) catatonia
 - (D) paranoia
 - (E) hebephrenia
7. Sigmund Freud believed that dream analysis was a useful device for
 - (A) decreasing repression
 - (B) sublimating the id
 - (C) strengthening the superego
 - (D) displacing instinctual forces
 - (E) gaining insight into unconscious motives
8. When rehearsal of incoming information is prevented, which of the following will most likely occur?
 - (A) The information will remain indefinitely in short-term memory.
 - (B) There will be no transfer of the information to long-term memory.
 - (C) The sensory register will stop processing the information.
 - (D) Retrieval of the information from long-term memory will be easier.
 - (E) Information already in long-term memory will be integrated with the incoming information.

GO ON TO THE NEXT PAGE 

9. Which of the following behavior-therapy techniques is typically used to reduce fear of heights?
 - (A) Time-out
 - (B) Punishment
 - (C) Discrimination learning
 - (D) Token economy
 - (E) Systematic desensitization
10. Painkilling substances produced by the brain are known as
 - (A) cortisols
 - (B) endorphins
 - (C) glucocorticoids
 - (D) pheromones
 - (E) hormones
11. Receptors that are especially important for helping a person maintain balance are located in the
 - (A) gyrus cinguli
 - (B) inner ear
 - (C) tendons
 - (D) ossicles
 - (E) ligaments
12. In terms of the effect on the central nervous system, alcohol is most accurately classified as which of the following types of drug?
 - (A) Depressant
 - (B) Narcotic
 - (C) Psychoactive
 - (D) Stimulant
 - (E) Hallucinogen
13. Research findings in the area of interpersonal attraction indicate that individuals are most likely to be attracted to others who are
 - (A) critical of them
 - (B) similar to them in attitudes and values
 - (C) like their parents
 - (D) willing to do favors for them
 - (E) indulgent of their failings
14. On a fishing trip, Ed realizes that he has mistakenly packed the sewing box instead of the tackle box. He wants to fish but returns home because he does not have any line or hooks. Ed's failure to realize that sewing thread can be used as fishing line and that a bent needle can be used as a hook is an example of
 - (A) poor problem representation
 - (B) cognitive accommodation
 - (C) backward masking
 - (D) functional fixedness
 - (E) proactive interference
15. Which of the following responses was most likely acquired through classical conditioning?
 - (A) The startle response of a baby the first time the baby hears thunder
 - (B) A child's fear of dogs after the child has been bitten by a dog
 - (C) The cry of pain expressed by a man whose hand has been cut on a piece of broken glass
 - (D) The uncontrollable blinking of a woman who has just gotten dust in her eye
 - (E) The salivation of a dog that is halfway through a bowl of its favorite food
16. If a man who is a heavy smoker is given an electric shock every time he takes a puff on a cigarette, which of the following behavior-modification techniques is being used?
 - (A) Systematic desensitization
 - (B) Modeling
 - (C) Aversive conditioning
 - (D) Homogeneous reinforcement
 - (E) Interlocking reinforcement
17. The failure of bystanders to give victims of automobile accidents needed assistance is sometimes explained as an instance of
 - (A) group polarization
 - (B) deindividuation
 - (C) situational attribution
 - (D) diffusion of responsibility
 - (E) mere exposure effect

GO ON TO THE NEXT PAGE 

Questions 18-19 refer to the situation described below.

In an experiment designed to determine whether watching violent scenes on television increases the frequency of aggressive behavior in children, one group of subjects saw a nonviolent cartoon and another group saw a violent cartoon. In the play period that followed the viewing of the cartoons, researchers observed the two groups of children together and counted instances of aggressive behavior.

18. The control group in the experiment is the group that
- (A) the researchers thought would be most aggressive
 - (B) performed the larger number of aggressive acts
 - (C) performed the smaller number of aggressive acts
 - (D) watched the violent cartoon
 - (E) watched the nonviolent cartoon
19. The dependent variable in the experiment is the
- (A) amount of aggressive behavior exhibited by the children
 - (B) amount of time that each child spent interacting with the other children
 - (C) group in which each child was originally placed
 - (D) violent cartoon
 - (E) nonviolent cartoon
20. Which of the following is most characteristic of individuals with chronic schizophrenia?
- (A) Extreme mood swings
 - (B) Disordered thinking
 - (C) Profound sadness
 - (D) Unaccountable loss of body function
 - (E) Loss of memory
21. Activation of the sympathetic branch of the autonomic nervous system results in
- (A) an increase in salivation
 - (B) an increase in digestion
 - (C) an increase in respiratory rate
 - (D) a decrease in heart rate
 - (E) a decrease in pupil dilation
22. The terms “modeling” and “imitation” are most closely associated with which of the following?
- (A) Classical conditioning
 - (B) Gestalt theory
 - (C) Hypothesis testing
 - (D) Operant conditioning
 - (E) Social learning theory
23. In a famous series of experiments conducted by Harry Harlow, infant monkeys were separated from their mothers at birth. The infants were then given two surrogate mothers (a terry-cloth “mother” and a wire “mother”), each of which alternately had a nursing bottle that provided food to the infants. The experimental results showed that in frightening situations the infant monkeys
- (A) were more likely to become aggressive toward the wire mother than toward the terry-cloth mother
 - (B) failed to seek out either of the mothers because of their lack of experience in seeking contact comfort
 - (C) preferred the wire mother, even when the terry-cloth mother had the nursing bottle
 - (D) preferred the terry-cloth mother, even when the wire mother had the nursing bottle
 - (E) would run and cling to whichever mother had the nursing bottle
24. According to Sigmund Freud, a child’s early experience in coping with external demands leads to the development of the
- (A) unconscious
 - (B) preconscious
 - (C) Oedipus complex
 - (D) id
 - (E) ego
25. According to Albert Bandura, people who believe that their efforts will be successful and that they are in control of events have a high level of
- (A) insight
 - (B) self-efficacy
 - (C) social responsibility
 - (D) reciprocal determinism
 - (E) self-monitoring skill

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26. Because studies of learning show that events occurring close together in time are easier to associate than those occurring at widely different times, parents should probably avoid which of the following?
- (A) Corporal punishment
 - (B) Mild punishment
 - (C) Consistent punishment
 - (D) Inescapable punishment
 - (E) Delay of punishment
27. According to Abraham Maslow's hierarchy of needs, which of the following statements is true?
- (A) Individuals may have peak experiences when meeting physiological needs.
 - (B) Self-actualization will always precede the meeting of needs for esteem.
 - (C) There are cultural differences in the rate at which individuals attain self-actualization.
 - (D) Women are more likely to reach self-actualization than men are.
 - (E) Physiological needs must be met before an individual achieves self-actualization.
28. A teen-ager would most probably draw on which of the following to recall her tenth birthday party?
- (A) Episodic memory
 - (B) Semantic memory
 - (C) Echoic memory
 - (D) Eidetic imagery
 - (E) State-dependent learning
29. Leadership, job satisfaction, and employee motivation are all studied in which of the following psychological disciplines?
- (A) Human factors psychology
 - (B) Industrial-organizational psychology
 - (C) Community psychology
 - (D) Counseling psychology
 - (E) Experimental psychology
30. According to the ethical guidelines set by the American Psychological Association (APA), which of the following is true of psychological research in which animals are used as subjects?
- (A) It must not involve the use of surgical procedures.
 - (B) It is no longer permitted by the APA without special authorization.
 - (C) It should conform to all APA ethical guidelines for animal research.
 - (D) It must be limited to investigations that use correlational procedures.
 - (E) It may not be conducted by psychologists who do not have a license.
- 31.* Which of the following is INCORRECTLY matched with the hormone that it secretes?
- (A) Thyroid gland..thyroxine
 - (B) Adrenal gland..epinephrine
 - (C) Pituitary gland..prolactin
 - (D) Pancreas..insulin
 - (E) Ovary..testosterone
32. Hunger and eating are primarily regulated by which of the following?
- (A) Androgens
 - (B) Estrogens
 - (C) The hypothalamus
 - (D) The kidneys
 - (E) The medulla oblongata
33. Elena is presented with a list of 20 numbers. When asked to recall this list, she remembers more numbers from the beginning than from the end of the list. This phenomenon demonstrates which of the following types of effect?
- (A) Mnemonic
 - (B) Primacy
 - (C) Recency
 - (D) Secondary
 - (E) Clustering

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*This question was not scored because recent research has invalidated option E as the correct answer.

34. A prototype is best defined as
- (A) an example of habituation
 - (B) an example of bottom-up processing
 - (C) the equivalent of feature abstraction
 - (D) the hypothetical "most typical" instance of a category
 - (E) an essential element of category membership
35. Theories of motivation that assert the existence of biological motives to maintain the body in a steady state are called
- (A) mechanistic
 - (B) homeostatic
 - (C) reductionistic
 - (D) genetic
 - (E) instinctual
36. According to attribution theory, Pablo is most likely to attribute his high score on a difficult exam to
- (A) good luck
 - (B) his intelligence
 - (C) his instructor's teaching ability
 - (D) the low level of difficulty of the exam
 - (E) his classmates' inadequate preparation for the exam
37. In which of the following types of research are the same children tested periodically at different points in their development?
- (A) Clinical case study
 - (B) Between subjects
 - (C) Cross-sectional
 - (D) Ethnographic
 - (E) Longitudinal
38. The occipital lobes contain
- (A) the primary visual cortex
 - (B) the prefrontal cortex
 - (C) the somatosensory cortex
 - (D) the pons
 - (E) sensory and motor connections to other brain regions
39. Eleanor Gibson and her colleagues have used the visual cliff to measure an infant's ability to perceive
- (A) patterns
 - (B) depth
 - (C) size constancy
 - (D) shape constancy
 - (E) different hues
40. The most well-adjusted and socially competent children tend to come from homes where parents employ which of the following parental styles?
- (A) Minimal supervision
 - (B) Authoritarian
 - (C) Authoritative
 - (D) Indulgent
 - (E) Permissive
41. Which of the following approaches to psychology emphasizes observable responses over inner experiences when accounting for behavior?
- (A) Behaviorist
 - (B) Cognitive
 - (C) Existentialist
 - (D) Psychodynamic
 - (E) Structuralist
42. Carla tutors other students because she likes to be helpful, whereas Jane tutors classmates strictly for pay. Their behaviors demonstrate the difference between
- (A) primary and secondary drives
 - (B) instinctive and derived drives
 - (C) appetitive and aversive motivation
 - (D) intrinsic and extrinsic motivation
 - (E) positive and negative reinforcement
43. The view that human emotions are universal has been supported by studies of
- (A) facial expressions
 - (B) body language
 - (C) linguistic structures
 - (D) hedonic relevance
 - (E) biological symmetry
44. Dopamine, norepinephrine, and acetylcholine are all
- (A) hormones excreted by the endocrine glands
 - (B) secretions of the exocrine glands
 - (C) drugs used in the therapeutic treatment of memory disorders
 - (D) enzymes involved with the degradation of interneuron signals
 - (E) neurotransmitters that excite or inhibit a neural signal across a synapse

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45. The cognitive theory of depression states that depression results from
- (A) anger directed toward the self and significant others
 - (B) an excess of certain neurotransmitters in the brain
 - (C) failure in adult love relationships
 - (D) maladaptive interpretations of life events
 - (E) oral fixations from disturbed mother-infant relationships
- 46.* All of the following infant behaviors are usually considered by developmental psychologists to be reflexes EXCEPT
- (A) rooting
 - (B) reaching
 - (C) sucking
 - (D) grasping
 - (E) smiling
47. The most common form of color blindness is related to deficiencies in the
- (A) blue-yellow system
 - (B) red-green system
 - (C) process of visual summation
 - (D) bipolar cells
 - (E) secretion of rhodopsin
48. A person is asked to listen to a series of tones presented in pairs, and asked to say whether the tones in each pair are the same or different in pitch. In this situation the experimenter is most likely measuring the individual's
- (A) sound localization ability
 - (B) dichotic listening ability
 - (C) difference threshold
 - (D) echoic memory
 - (E) attention span
49. A survey shows that children who have encyclopedias in their homes earn better grades in school than children whose homes lack encyclopedias. The researcher concludes that having encyclopedias at home improves grades. This conclusion is erroneous primarily because the researcher has incorrectly
- (A) failed to allow for experimenter bias
 - (B) identified the independent variable
 - (C) identified the dependent variable
 - (D) inferred correlation from causation
 - (E) inferred causation from correlation
50. The release of those with mental disorders from mental hospitals for the purpose of treating them in their home communities is called
- (A) deinstitutionalization
 - (B) milieu therapy
 - (C) primary prevention
 - (D) secondary prevention
 - (E) noncrisis intervention
51. Lawrence Kohlberg's theory of moral reasoning is best described by which of the following?
- (A) Personal conscience is innate and all human beings develop it at the same rate.
 - (B) By adulthood, all people judge moral issues in terms of self-chosen principles.
 - (C) Ethical principles are defined by ideals of reciprocity and human equality in individualistic societies, but by ideals of law and order in collectivistic societies.
 - (D) Children grow up with morals similar to those of their parents.
 - (E) Children progress from a morality based on punishment and reward to one defined by convention, and ultimately to one defined by abstract ethical principles.
52. The intelligence quotient (IQ) has traditionally been based on the relationship between an individual's mental age and his or her
- (A) stage of cognitive development
 - (B) level of physiological development
 - (C) reading ability
 - (D) chronological age
 - (E) quantitative aptitude
53. In Ivan Pavlov's experiments in classical conditioning, the dog's salivation was
- (A) an unconditioned stimulus only
 - (B) an unconditioned response only
 - (C) a conditioned response only
 - (D) both an unconditioned and a conditioned stimulus
 - (E) both an unconditioned and a conditioned response

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*This question was not scored because results of recent research indicate that more than one answer may be correct.

54. Which of the following is a characteristic common to all individuals with a narcissistic personality disorder?
- (A) A domineering attitude toward others
 - (B) An unwarranted sense of self-importance
 - (C) Restricted ability to express warmth and affection
 - (D) Inability to form social relationships
 - (E) Oversensitivity to rejection or possible humiliation
55. Hypnosis has been found useful in the treatment of
- (A) pain
 - (B) autism
 - (C) dementia
 - (D) paranoia
 - (E) schizophrenia
56. In a normal distribution of test scores, the percentage of scores that fall at or below the mean score is
- (A) 17.5
 - (B) 25
 - (C) 50
 - (D) 66.6
 - (E) 95
57. Persistent repetitive thoughts that cannot be controlled are known as
- (A) compulsions
 - (B) obsessions
 - (C) phobias
 - (D) delusions
 - (E) sublimations
58. Which of the following statements is true of behaviorism?
- (A) It was formulated to account for cognitive development.
 - (B) It is rooted in Sigmund Freud's view of the importance of early experiences.
 - (C) It focuses on the development of thought processes and knowledge.
 - (D) It holds that development is largely a product of learning.
 - (E) It emphasizes the dominance of heredity over environment.
59. Which of the following best characterizes individuals diagnosed as having personality disorders?
- (A) They are typically afraid to leave their homes.
 - (B) They are consistently psychotic in their cognition and affect.
 - (C) They may function reasonably well in society.
 - (D) Their symptoms are characterized by sudden onset and short duration.
 - (E) They developed their problems as a result of drug abuse.
60. The mean will be higher than the median in any distribution that
- (A) is symmetrical
 - (B) is not normal
 - (C) is positively skewed
 - (D) represents measures for a random sample
 - (E) represents measures for a biased sample
61. Which of the following is typically cited as a characteristic of autistic children?
- (A) Minor developmental delays in academic achievement
 - (B) Above-average performance on tests of creativity
 - (C) Severely impaired interpersonal communication
 - (D) Tendency to seek younger playmates
 - (E) Paranoia comparable with that experienced in schizophrenia
62. The goal of rational-emotive therapy is to help clients
- (A) focus on the significance of childhood events for current feelings of self-worth
 - (B) correct self-defeating thoughts about their lives
 - (C) avoid putting themselves in risky situations
 - (D) practice relaxation techniques and autohypnosis to reduce anxiety
 - (E) use introspection to alleviate their feelings of self-doubt

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63. A person with sight in only one eye lacks which of the following visual cues for seeing in depth?
- (A) Retinal disparity
 - (B) Linear perspective
 - (C) Motion parallax
 - (D) Relative size
 - (E) Texture gradient
64. Multiple personality is a type of
- (A) dissociative disorder
 - (B) schizophrenia
 - (C) dementia praecox
 - (D) bipolar disorder
 - (E) manic-depressive psychosis
65. The intensity at which a sound becomes audible for a given individual is known as the individual's
- (A) contrast sensitivity
 - (B) absolute threshold
 - (C) response threshold
 - (D) critical frequency
 - (E) just noticeable difference
66. A teacher asks students to think of as many uses for a brick as possible. By listing 50 uses, most of which the class finds new and unusual, Susan is displaying
- (A) computational learning
 - (B) paired-associate learning
 - (C) hypothetical thinking
 - (D) divergent thinking
 - (E) convergent thinking
67. The primary effect of the myelin sheath is to
- (A) increase the velocity of conduction of the action potential along the axon
 - (B) increase the velocity of conduction of the action potential across the synapse
 - (C) facilitate the incoming stimulus signals at sensory receptors
 - (D) reduce the amount of unused neurotransmitter in the synaptic cleft
 - (E) protect the terminal buttons of the neuron from destruction by enzymes
68. Which of the following was true of Solomon Asch's experiments on conformity?
- (A) People conformed if they knew and respected the authority figure present.
 - (B) An increase from 7 to 12 confederates increased conformity by experimental subjects.
 - (C) Experimental subjects conformed less frequently when their judgments were made known to the group.
 - (D) About 99% of the judgments made by the experimental subjects were wrong.
 - (E) If the confederates' judgments were not unanimous, the degree of conformity by experimental subjects decreased.
69. Which of the following concepts was advanced by social psychologists to help explain why people who are part of a crowd sometimes commit aggressive, antisocial acts that they would not commit if they were alone?
- (A) Groupthink
 - (B) Cognitive dissonance
 - (C) Social facilitation
 - (D) Deindividuation
 - (E) Catharsis
70. A somatoform disorder is best described as an illness that
- (A) results from inadequate parenting in childhood
 - (B) occurs when defense mechanisms are used inappropriately
 - (C) is psychological in nature with no physical symptoms
 - (D) is physical in nature with no psychological symptoms
 - (E) is physical in nature and caused by psychological factors
71. It is widely known in Jerry's social circle that he is the most stubborn and inflexible member of the group. Yet Jerry complains that all his friends are opinionated and rigid. Jerry's complaints are most clearly a sign of
- (A) displacement
 - (B) repression
 - (C) projection
 - (D) reaction formation
 - (E) rationalization

72. Which of the following is a genetic disorder that results in a deficiency of a liver enzyme which, if not treated soon after birth, may eventually lead to profound mental retardation?
- (A) Down syndrome
 - (B) Tay-Sachs disease
 - (C) Fetal alcohol syndrome
 - (D) Toxoplasmosis
 - (E) Phenylketonuria (PKU)
73. Electroconvulsive therapy has been most successful in the treatment of
- (A) phobias
 - (B) schizophrenia
 - (C) psychogenic amnesia
 - (D) multiple personality
 - (E) clinical depression
74. Which of the following is most useful in understanding an employer's interpretation of an employee's poor performance?
- (A) Cannon's theory
 - (B) Reinforcement theory
 - (C) Attribution theory
 - (D) Arousal theory
 - (E) Cognitive dissonance
75. Which of the following accurately describes a major change in perspective in the field of developmental psychology over the past twenty-five years?
- (A) A shift from an emphasis on childhood and adolescence to an interest in development over the life span
 - (B) A shift from a cognitive to a psychoanalytic interpretation of developmental phenomena
 - (C) A shift in research focus from cognitive to personality development
 - (D) A decrease in interest in the physiological factors affecting growth and development
 - (E) A decrease in interest in the study of the cognitive components of intellect
76. Which of the following has been most effective in the treatment of schizophrenia?
- (A) Administration of L-dopa
 - (B) Prefrontal lobotomy
 - (C) Psychoanalytic therapy
 - (D) Drug therapy that blocks neurotransmitter sites
 - (E) Drug therapy that increases the activity of limbic system neurons
77. Which of the following allows the examination of living brain tissue visually without performing surgery?
- (A) Computerized axial tomography
 - (B) Stereotaxic examination
 - (C) Retrograde degeneration
 - (D) Biofeedback
 - (E) Ablation
78. The change in the curvature of the lens that enables the eye to focus on objects at various distances is called
- (A) accommodation
 - (B) adaptation
 - (C) conduction
 - (D) convergence
 - (E) consonance
79. The hypothesis that intelligence is in part inherited is best supported by the fact that the IQ correlation for
- (A) pairs of twins reared together is greater than the correlation for pairs of twins reared apart
 - (B) pairs of identical twins is greater than for pairs of fraternal twins
 - (C) pairs of fraternal twins is greater than the correlation for other pairs of siblings
 - (D) adopted children and their adoptive parents is greater than zero
 - (E) adopted children and their adoptive parents is greater than the correlation for the same children and their biological parents
80. The technique of strengthening behavior by reinforcing successive approximations is called
- (A) positive reinforcement
 - (B) negative reinforcement
 - (C) distributed practice
 - (D) modeling
 - (E) shaping

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81. According to Jean Piaget, what is the earliest stage at which a child is capable of using simple logic to think about objects and events?
- (A) Sensorimotor
 - (B) Preoperational
 - (C) Symbolic
 - (D) Concrete operational
 - (E) Formal operational
82. Bipolar disorders are most effectively treated with a combination of tricyclic antidepressants and
- (A) acetaminophen
 - (B) anti-anxiety drugs
 - (C) beta-blockers
 - (D) amphetamines
 - (E) lithium carbonate
83. The tendency of most people to identify a three-sided figure as a triangle, even when one of its sides is incomplete, is the result of a perceptual process known as
- (A) closure
 - (B) proximity
 - (C) similarity
 - (D) feature analysis
 - (E) shape constancy
84. According to Carl Rogers, the role of the therapist in person-centered psychotherapy is to
- (A) accept the client unconditionally so that the client's own desire for mental health and positive growth will flourish
 - (B) express warmth and empathy and suppress negative feelings that arise in the relationship with the client
 - (C) use a didactic approach to teach the client to correct maladaptive behavior
 - (D) establish behavior-change programs to alter the problematic behavior that is often learned in early childhood
 - (E) define ideal characteristics of mental health for the client and to encourage the client to incorporate these elements in his or her personality
85. One criticism of Sigmund Freud's psychosexual theory of development is that it
- (A) emphasizes developmental changes in the oral and anal stages
 - (B) views adult disorders as adjustments to the environment
 - (C) views fear of loss as a motivating drive
 - (D) is based on empirically unverifiable constructs
 - (E) is based on ethnographic studies
86. For most people, which of the following is an activity based in the right hemisphere of the brain?
- (A) Muscular control of the right hand
 - (B) Simple spatial reasoning
 - (C) Arithmetic reasoning
 - (D) Language comprehension
 - (E) Speech
87. Which of the following are the stages in Hans Selye's general adaptation syndrome?
- (A) Appraisal, stress response, coping
 - (B) Shock, anger, self-control
 - (C) Anxiety, fighting, adapting
 - (D) Alarm, resistance, exhaustion
 - (E) Attack, flight, defense
88. The defense mechanism of reaction formation is best exemplified in which of the following situations?
- (A) A college student speaks sharply to her roommate after quarreling with her professor about her grades.
 - (B) A woman who is unaware of her anger toward her friend expresses affection for that friend.
 - (C) A runner forgets the name of the opponent who just defeated her in an event for which she held the record.
 - (D) A man who dislikes his supervisor believes that his supervisor dislikes him.
 - (E) An elderly man lights up a cigarette just after learning that he has been cured of a respiratory ailment.
89. Which of the following is true of the reticular activating system?
- (A) It is the major system in the brain for controlling emotions.
 - (B) It functions primarily in the control of motor responses.
 - (C) It regulates levels of arousal.
 - (D) It regulates body temperature.
 - (E) It controls the uptake of pituitary hormones.

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90. Which of the following types of test is designed to measure an individual's knowledge of a subject?
- (A) Achievement
 - (B) Attitude
 - (C) Aptitude
 - (D) Projective
 - (E) Interest inventory
91. A word or part of a word that is in itself meaningful, but that cannot be broken into smaller meaningful units, is called a
- (A) grapheme
 - (B) morpheme
 - (C) phoneme
 - (D) performative
 - (E) holophrase
92. Which of the following studies has had the most profound impact on ethical issues in psychological research?
- (A) Stanley Milgram's study of obedience
 - (B) Solomon Asch's study of conformity
 - (C) Daryl Bem's study of self-perception
 - (D) William McGuire's study of self-concept
 - (E) Leon Festinger's study of cognitive dissonance
93. Behaviorally oriented therapists seek to modify a client's behavior by
- (A) repressing the client's deviant thoughts
 - (B) relating past events to the client's current behavior
 - (C) removing the underlying causes of the client's behavioral problems
 - (D) explaining the significance of the client's dreams
 - (E) changing the contingencies of reinforcement for the client
94. If Carmelita stares at a red spot for one minute and then shifts her gaze to a white piece of paper, she is likely to experience an afterimage that is
- (A) green
 - (B) red
 - (C) blue
 - (D) violet
 - (E) black
95. The place in the retina where the optic nerve exits to the brain is called the
- (A) lens
 - (B) sclera
 - (C) fovea
 - (D) blind spot
 - (E) aqueous humor
96. Responses extinguish fastest when they are learned through which type of reinforcement schedule?
- (A) Continuous
 - (B) Negative
 - (C) Variable-interval
 - (D) Variable-ratio
 - (E) Fixed-interval
97. According to Benjamin Whorf's linguistic relativity hypothesis, which of the following is true?
- (A) Individuals have a natural predisposition to learn language.
 - (B) Individuals learn positive instances of concepts faster than they learn negative instances.
 - (C) Children learn their first language from their relatives and their peer group.
 - (D) Different languages predispose those individuals who speak them to think about the world in different ways.
 - (E) Children learn quantifying words such as "more" and "further" sooner than they do absolutes such as "every" and "all."
98. In their discussions of the process of development, the advocates of nature in the nature-nurture controversy emphasize which of the following?
- (A) Socialization
 - (B) Cognition
 - (C) Maturation
 - (D) Experience
 - (E) Information processing

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99. Which of the following is an example of metacognition?

- (A) Memorizing 100 words in a foreign language
- (B) Recognizing the faces of people after meeting them once
- (C) Solving a complex problem in a slow, deliberate way
- (D) Understanding the role of various parts of the brain in memory
- (E) Knowing the effectiveness of different strategies for learning statistical formulas

100. The debate over whether development occurs gradually, without discernible shifts, or through a series of distinct stages is termed

- (A) nature vs. nurture
- (B) developmental vs. cognitive
- (C) cross-sectional vs. longitudinal
- (D) continuity vs. discontinuity
- (E) maturation vs. learning

END OF SECTION I

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY
CHECK YOUR WORK ON THIS SECTION.

DO NOT GO ON TO SECTION II UNTIL YOU ARE TOLD TO DO SO.

The College Board
Advanced Placement Examination
PSYCHOLOGY
SECTION II

The green insert may be used for scratchwork as you answer the free-response questions, but be sure to write your answers in the pink booklet. Please write your answers with a pen. No credit will be given for work shown in this green insert.

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PSYCHOLOGY

SECTION II

Time—45 minutes

Percent of total grade— $33\frac{1}{3}$

Directions: You have 45 minutes to answer BOTH of the following questions. It is not enough to answer a question by merely listing facts. You should present a cogent argument based on your critical analysis of the question posed.

1. Design an experiment to determine whether a new drug that is supposed to reduce hyperactivity in children actually does. Your essay should include an identification and description of all of the components of your experimental design, including sampling, independent and dependent variables, controls, and the method that you would employ to evaluate the outcome.

2. One of the most useful generalizations in psychology is that "behavior is adaptive." Explain this generalization and then identify each of the following and describe how each could be adaptive.
- A. Repression
 - B. Conformity
 - C. Imprinting
 - D. Displaced aggression
 - E. Loss of information from short-term memory

END OF EXAMINATION

Chapter III

Answers to the 1994 AP Psychology Examination

SECTION I: MULTIPLE-CHOICE

Listed below are the correct answers to the multiple-choice questions and the percentage of AP candidates who answered each question correctly.* As a general

rule, candidates who did well in this section also achieved a higher mean score on the test as a whole than candidates who did not do so well. An answer sheet gridded with the correct responses appears on the next page.

Section I Answer Key and Percent Answering Correctly

Item No.	Correct Answer	Percent Correct	Item No.	Correct Answer	Percent Correct	Item No.	Correct Answer	Percent Correct
1	C	95%	35	B	78%	69	D	54%
2	A	97%	36	B	61%	70	E	57%
3	A	98%	37	E	79%	71	C	21%
4	E	92%	38	A	68%	72	E	75%
5	C	63%	39	B	91%	73	E	65%
6	D	91%	40	C	61%	74	C	59%
7	E	95%	41	A	32%	75	A	61%
8	B	81%	42	D	69%	76	D	22%
9	E	96%	43	A	79%	77	A	78%
10	B	92%	44	E	63%	78	A	70%
11	B	89%	45	D	69%	79	B	67%
12	A	93%	46*	—	—	80	E	64%
13	B	83%	47	B	57%	81	D	46%
14	D	81%	48	C	46%	82	E	50%
15	B	86%	49	E	60%	83	A	66%
16	C	91%	50	A	80%	84	A	68%
17	D	56%	51	E	64%	85	D	60%
18	E	89%	52	D	85%	86	B	40%
19	A	66%	53	E	80%	87	D	45%
20	B	75%	54	B	49%	88	B	46%
21	C	71%	55	A	51%	89	C	41%
22	E	74%	56	C	65%	90	A	69%
23	D	83%	57	B	70%	91	B	41%
24	E	55%	58	D	74%	92	A	56%
25	B	73%	59	C	47%	93	E	50%
26	E	94%	60	C	55%	94	A	72%
27	E	87%	61	C	68%	95	D	52%
28	A	77%	62	B	54%	96	A	73%
29	B	86%	63	A	53%	97	D	46%
30	C	80%	64	A	78%	98	C	40%
31*	—	—	65	B	68%	99	E	21%
32	C	84%	66	D	69%	100	D	55%
33	B	73%	67	A	54%			
34	D	70%	68	E	44%			

* Multiple-choice questions number 31 and 46 were not scored because recent research called the keys into question. Therefore, the maximum number of multiple-choice questions that candidates could have answered correctly was 98.

Sign your name as it will appear on your college applications.

Omit spaces, hyphens, apostrophes, Jr. or III.

Last Name - first 15 letters

First Name - first 12 letters

M

[illegible]

Psychology

Print examination name:

Fill in the appropriate oval below for examination name and number.

- | | | | | | |
|----|---------------------|----|-------------------------|----|--------------------|
| 07 | U.S. History | 36 | Eng. Language & Comp | 66 | Math.: Calculus AB |
| 13 | Art History of | 37 | Eng. Literature & Comp. | 68 | Math.: Calculus BC |
| 14 | Art Studio Drawing | 43 | European History | 75 | Music Theory |
| 15 | Art Studio General | 48 | French Language | 78 | Physics B |
| 20 | Biology | 51 | French Literature | 80 | Physics C: Mech. |
| 25 | Chemistry | 55 | German Language | 80 | Physics C: E & M |
| 31 | Computer Science A | 57 | Gov. & Pol.: U.S. | 85 | Psychology |
| 33 | Computer Science AB | 58 | Gov. & Pol.: Comp. | 87 | Spanish Language |
| 34 | Economics: Micro | 60 | Latin: Vergil | 89 | Spanish Literature |
| 35 | Economics: Macro | 60 | Latin Literature | | |

III. Essay Choices

Fill in the ovals under the numbers of the essay questions you answered in this examination.

- 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○
7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12 ○

H2.

Language, Spanish Language, or Spanish Literature Examination, please answer the following questions. (Your responses will not affect your grade.)

1. Have you lived or studied for one month or more in a country where the language of the exam you are now taking is spoken? ☐ Yes ☐ N
2. Do you regularly speak or hear the language at home? ☐ Yes ☐ N

- ☐ English
- ☐ English and another language about the same
- ☐ Another language

BE SURE EACH MARK IS DARK AND COMPLETELY FILLS THE INTENDED SPACE. IF A QUESTION HAS ONLY FOUR ANSWER OPTIONS, DO NOT MARK THE OPTION E.

1 A B C D E	26 A B C D E	51 A B C D E	76 A B C D E	101 A B C D E	126 A B C D E
2 B C D E	27 A B C D E	52 A B C D E	77 B C D E	102 A B C D E	127 A B C D E
3 C D E	28 B C D E	53 A B C D E	78 B C D E	103 A B C D E	128 A B C D E
4 A B C D E	29 A C D E	54 A C D E	79 A C D E	104 A B C D E	129 A B C D E
5 A B C D E	30 A B D E	55 B C D E	80 A B C D E	105 A B C D E	130 A B C D E
6 A B C D E	31 A B C D E	56 A B D E	81 A B C D E	106 A B C D E	131 A B C D E
7 A B C D E	32 A B D E	57 A C D E	82 A B C D E	107 A B C D E	132 A B C D E
8 A C D E	33 A C D E	58 A B C D E	83 B C D E	108 A B C D E	133 A B C D E
9 A B C D E	34 A B C D E	59 A B D E	84 B C D E	109 A B C D E	134 A B C D E
10 A C D E	35 A C D E	60 A B D E	85 A B C D E	110 A B C D E	135 A B C D E
11 A C D E	36 A C D E	61 A B D E	86 A C D E	111 A B C D E	
12 B C D E	37 A B C D E	62 A C D E	87 A B C D E	112 A B C D E	
13 A C D E	38 B C D E	63 B C D E	88 A C D E	113 A B C D E	
14 A B C D E	39 A C D E	64 B C D E	89 A B D E	114 A B C D E	
15 A C D E	40 A B D E	65 A C D E	90 B C D E	115 A B C D E	
16 A B C D E	41 B C D E	66 A B C D E	91 A C D E	116 A B C D E	
17 A B C D E	42 A B C D E	67 B C D E	92 B C D E	117 A B C D E	
18 A B C D E	43 B C D E	68 A B C D E	93 A B C D E	118 A B C D E	
19 B C D E	44 A B C D E	69 A B C D E	94 A B C D E	119 A B C D E	
20 A B C D E	45 A B C D E	70 A B C D E	95 A B C D E	120 A B C D E	
21 A B C D E	46 B C D E	71 A B C D E	96 B C D E	121 A B C D E	
22 A B C D E	47 A C D E	72 A B C D E	97 A B C D E	122 A B C D E	
23 A B C D E	48 A B D E	73 A B C D E	98 A B C D E	123 A B C D E	
24 A B C D E	49 A B C D E	74 A B D E	99 A B C D E	124 A B C D E	
25 A C D E	50 B C D E	75 B C D E	100 A B C D E	125 A B C D E	

■ SECTION II: FREE-RESPONSE

Report of the Chief Faculty Consultant

Kathleen Malley

Boston University

Setting and Maintaining Standards

The development of scoring guidelines and procedures for the free-response sections of AP Examinations is vital to ensuring scoring consistency and uniformity. The goal of the process is to have all faculty consultants evaluate the students' responses fairly, uniformly, and according to group standards.

Prior to the scoring of the free-response questions at the Reading each June, the chief faculty consultant, using the Development Committee's input and copies of student responses as guides, drafts the general criteria and scoring scales for each free-response question. Two or three days before the Reading begins, the chief faculty consultant, the table leaders, and consultants from Educational Testing Service (ETS) meet at the site of the Reading. They review and revise the preliminary scoring guides and then try them out on a randomly selected group of sample papers. Scores are then assigned, by consensus, to these papers, which will be used as models for training the faculty consultants who read and score the rest of the student responses.

For all AP Examinations, the scoring of questions in the free-response section is always preceded by a training session in which faculty consultants are taught to apply one set of scoring standards to each question and to do so consistently and without bias. Firstly, the faculty consultants study the samples that the table leaders used to set the preliminary scoring guidelines. They then compare and discuss the scores for the samples, which reflect various levels of student ability, the objective being both to refine the guidelines and to teach the faculty consultants to apply them in a consistent and reliable manner. Final wording of the guidelines is set at the end of this training and discussion. The faculty consultants can then apply the standards consistently and with little disagreement as they read the student responses.

The initial training is reinforced and rechecked in a variety of ways. The group is asked periodically to discuss samples that have already been scored, focusing on how the standards were applied. Random "spot checks," in which a response that has been scored by a

faculty consultant is scored again by the table leader, occur throughout the Reading. These checks allow individual scores to be compared and provide information on retraining needs, thus acting to maintain the standards.

The chief faculty consultant and the table leaders make sure that the full range of the scoring scale is being used by checking score distributions for the group as a whole and each faculty consultant individually. Each faculty consultant is asked at least once to rescore a set of five selected papers that he or she has already scored, without seeing the previously assigned score. When differences between the original and rescored evaluations occur, the faculty consultant reconsiders the final score, perhaps in consultation with colleagues or the table leader. The table leader also looks at these papers to insure that the faculty consultant is applying the scoring standards consistently both with reference to others as well as to himself or herself. Faculty consultants are trained never to guess when scoring, and encouraged to seek advice when in doubt about a score. A student response that is problematic receives multiple readings and evaluations.

As in all AP scoring procedures, the names of the students are concealed, and faculty consultants usually score only one question per student. Faculty consultants do not see the scores assigned by other faculty consultants to responses on other questions. All these measures are designed to provide fair and consistent grading based on a consensus of the faculty consultants.

The Reading

In June of 1994, 42 secondary school, college, and university psychology teachers met to score 8,830 responses written by AP Psychology candidates. The Reading took place at Clemson University in South Carolina. These faculty consultants are experienced psychology instructors of either undergraduate introductory courses or of AP courses in secondary schools. Approximately 30 percent were new to the AP Reading in 1994. To reflect the diversity of the candidates and the institutions that are part of the AP Program, the chief faculty consultant appoints consultants from different geographic regions, types of institutions, and racial and ethnic groups.

For the 1994 Reading, the group of psychology faculty consultants was divided into two groups, each assigned to one of the two essays. This practice helped the reading reliability of the free-response section

because it allowed for greater consensus on scoring standards among fewer people.

General Comment

The faculty consultants, table leaders, and chief faculty consultant concluded after this June's Reading that the free-response section of the 1994 AP Psychology Examination was challenging, but fair. Question 1 called for an understanding of the fundamental prin-

ciples of experimental design, while Question 2 touched on several different domains within psychology by requiring students to address issues concerning the adaptability of different kinds of behavior.

The sample student responses that follow are used with the permission of the students who wrote them and appear in their original format, unedited for grammar, spelling, or punctuation. When reading these responses, remember that they were written under examination conditions and within a time limit.

Free-Response Question 1

Design an experiment to determine whether a new drug that is supposed to reduce hyperactivity in children actually does. Your essay should include an identification and description of all of the components of your experimental design, including sampling, independent and dependent variables, controls, and the method that you would employ to evaluate the outcome.

Question 1 Scoring Guide

There are five components to this question in experimental design: (1) Sampling; (2) Independent variable; (3) Dependent variable; (4) Controls; and (5) Method of evaluating outcome. Each of these components can earn up to 2 points — 1 for “identification” and 1 for “description.” The specific criteria for the 10 points follow:

SAMPLE:

- (1) The subjects must be identified as hyperactive children — although points will not be taken off if sample is described as including normal children as well, as long as hyperactive children are in both the experimental and placebo (or control) group.
- (2) There must be some indication of a sampling (selection) procedure, e.g., an indication of whether subjects will be selected randomly, or be representative, any notion of subtest of a larger group is acceptable. Control: Demographics not scored in this context.

IV:

- (3) The IV is identified as the drug/drug treatment.
- (4) The treatment is described, e.g., division of sample into at least one experimental and at least one other group, e.g., one that receives a placebo, other level of the drug, different drug or no drug.

DV:

- (5) The DV is identified as hyperactive behavior or a change in hyperactive behavior.
- (6) The specific hyperactive behavior to be measured or the method used to determine change (e.g., a scale of 1-100, observation of specific behaviors that may indicate hyperactivity of physical index). “Measuring hyperactivity”: not enough.

CONTROLS:

- (7) References made to a placebo (or other drug) within the context of a control.
- (8) Reference made to other control techniques, e.g., random assignment to treatment groups, double (or single) blind procedures, demographics, drug vs. non-drug groups — in the context of controls.

EVALUATION:

- (9) a) Indication that statistics will be used to evaluate difference between groups or b) other approach to determining reliability and/or validity of findings (e.g., replication).
- (10) Indication that groups will be compared to determine effectiveness of drug or indication that groups will be significantly different (not necessary to say “statistically significant”).

Sample Student Responses

Student Response 1 (Excellent)

An experiment to determine whether a new drug actually reduces hyperactivity in children would begin by randomly sampling within a group of children with certified hyperactivity to control for unknown confounding variables. Then the children would be randomly assigned to either the control or experimental groups. The experimental group is the group receiving the new drug while the control group would not. The independent variable would be the drug and ~~the~~ the dependent variable would be the hyperactive behavior. ~~The control group, however, will receive a placebo to ensure that the administration of any substance is not the determining factor in behavior altering. A double blind will be used - the experimenter will not know which children were given the placebo or the actual drug to ensure no biasing in his/her evaluation. The children will also be, uninformed of the nature of whatever substance is being administered so that their actions will not be governed by knowing the effects of the substance. The evaluator will observe the children through naturalistic observation using unobtrusive measures to ensure that his presence does not affect the subjects' behavior. The results outcome, would be evaluated by~~

the experimenters comparing the behaviors of the control and experimental groups to determine if the drug was correlated with a decrease in hyperactivity. Inferential statistics would then be used to determine if the results occurred by chance.

Comment: This essay, which earned 10 points, shows a clear grasp of experimental design and methodology. The faculty consultants were particularly impressed by the student's awareness of the need for experimental controls. The student also has excellent writing skills and expresses himself or herself in a clear and organized fashion.

The student's opening sentence gains 2 points on the issue of sampling. The student recognizes that this study should be done on hyperactive children (not all essayists did). The student also knows that the subjects in this experiment should be selected by sampling to control for "unknown confounding variables." The student proposes a solid experimental design, dividing the subjects into two groups: an experimental group which receives the new drug, and a control group which does not. The student shows awareness of the need to assign the subjects to the two groups on a random basis — one of several indications of this student's grasp of experimental control. The independent variable is explicitly identified as the drug and the dependent variable as the hyperactive behavior. The student recognizes the critical need for a placebo control in this type of research and is able to state why such a control is necessary. The student also recognizes the need for a double-blind design as a further control and clearly describes such a procedure. The student describes a way of measuring the dependent variable "through naturalistic observation using unobtrusive measures." This excellent essay could have been made even better if the student had described some means of objectifying or operationally defining these measurements. The student recognizes the need to compare the two groups to determine the effectiveness of the medication and that statistical treatment would be necessary to evaluate the outcome.

Student Response 2 (Good)

Fifty hyperactive children take part in an experiment to determine whether a new drug that is supposed to reduce hyperactivity in children actually does. Twenty-five of the children are given the new drug for a three month period. The other twenty-five children are not given the drug and represent the control group of the experiment. All fifty children have similar environments throughout the experiment, in an attempt to decrease the number of variables which would affect the outcome.

The independent variable in the experiment, ~~assuming~~ that all environmental variables are eliminated, is the new drug. The variable that is dependent on this new drug is hyperactivity. At the end of the three month period the behavior of both groups of children is observed in a controlled environment. Data is taken and several graphs (bar) are drawn comparing the hyperactivity of the children who took the drug to the hyperactivity of the children who didn't.

If the hyperactivity of the group tested, or of the children who took the drug, has noticeably decreased when compared with the children that didn't take the drug, then the new drug should be tested further and eventually administered to all hyperactive children. If the hyperactivity of the tested group is the same as the hyper-

activity of the control group than the drug is not doing what its supposed to do and should not be administered to other hyperactive children. Further experimentation would also be valuable in the second outcome.

Comment: The student recognizes that the study should be done on hyperactive children but does not describe any way of selecting the children for this particular study; i.e., the student does not fully deal with the sampling issue. The experimental design properly divides the subjects into two groups, the experimental group which receives the medicine and the control group which does not receive the medication. The final sentence of the first paragraph begins to address the need for various experimental controls. The student correctly identifies the independent variable and the dependent variable and demonstrates good understanding of these concepts. The student merely says that "data are taken," but does not state how the behaviors on which the data is based will be objectified (operationally defined) to ensure accurate and reliable measurement of the dependent variable. Because of the powerful effects of subjects' expectations and their belief in the efficacy of any medication, particularly a new medicine, a placebo control is necessary in virtually all research on the effectiveness of a particular treatment approach (medical or psychological). The student fails to provide this vital experimental control, and loses the point. The student compares the outcome measures (hyperactivity) of the two groups appropriately and does so with "several graphs (bar)," a descriptive statistical treatment. A stronger essay would have described some use of inferential statistics. The need to do further experimentation, stated in the last sentence, is another way of evaluating the outcome and also would have gained the point. This essay scored a total of 7 points.

Free-Response Question 2

One of the most useful generalizations in psychology is that “behavior is adaptive.” Explain this generalization and then identify each of the following and describe how each could be adaptive.

- A. Repression
- B. Conformity
- C. Imprinting
- D. Displaced aggression
- E. Loss of information from short-term memory

Question 2 Scoring Guide (Total of 11 points)

A. Explain the generalization “Behavior is adaptive.” (1 point)

In order for a behavior to persist in an organism, the behavior must serve some useful function; i.e., the behavior must allow the organism to survive.

B. Identify each concept below (1 point) and describe how each could be adaptive (1 point).

CONCEPT	IDENTIFY (DEFINE)	ADAPTIVE FUNCTION
Repression	Putting traumatic or ego threatening events into the unconscious (motivated forgetting) — the notion of the events or memories being “out of consciousness” is acceptable.	Protects self against harmful, painful, crippling memories, unacceptable thoughts, and allows for effective functioning — permitting the organism to continue with life — to move on.
Conformity	Going along with the dominant norms, mores or behavior of the group.	Allows individual to be accepted by the group, to feel part of the group, to function more efficiently because of the group, to fit in, to increase the individual’s chances of survival by belonging to the group. There is the understanding that there is a personal gain.
Imprinting	Following the 1st object the organism is exposed to during critical period early in life. The mention of imitation is never sufficient in itself unless linked to a notion that conveys the idea of a critical period.	Allows behaviors to develop toward parent ensuring physical survival, or activity necessary for survival — i.e., feeding, protection.
Displaced aggression	Aggressing against an object or person instead of directly against the source instigating the aggression — the notion of displacing anger without a clear indication of a source of the anger not accepted.	Allows the individual to vent aggression on a less threatening object or person while continuing a relationship with the instigator (protecting oneself or others).
Loss of information from short-term memory	Information does not enter long-term memory store. Loss is due to the limited storage capacity of STM or lack of rehearsal or processing.	Protects long-term memory from being cluttered, overloaded, or overwhelmed (creating retrieval problems). The loss allows new information to enter short-term memory.

Sample Student Responses

Student Response 1 (Excellent)

Because this essay did not copy clearly, it is transcribed on page 39 for your convenience.

The concept of behavior being adaptive is not a new one, it has existed in biology for hundreds of years. To put it simply, it means that certain behaviors or body functions exist because they help the ~~man~~ creature survive. In biology, this concept is applied to the different structures of organisms, but in biology it is used to explain how we act in a survival context.

^{The unconscious forgetting of painful events}
Repression ~~could be~~ adaptive by allowing us to live our lives without dwelling on past bad experiences. Without repression, you would remember your most painful past events, which would not allow you to function normally due to the depression and anxiety they may cause. Without repression basically, bad experiences would stay at the surface, creating tension that could disrupt our lives. Getting rid of this tension is the adaptive quality of repression.

~~Being~~ Becoming part of the group, and doing what they do, and acting how they want you to act is called conforming. Conforming can be considered adaptive for many reasons. First, for protection. If you conform, you are most likely to be accepted by a group, and if you are part of the group you are more protected from the outside environment. Also, conforming allows you to get accepted, which is also emotionally good for you. Feelings of acceptance and a high self-esteem can be gained by conforming to what a group wants you to do, because normally you would gain praise for it.

^{The taking of the first seen moving object as "prey"}
Empiricism ~~is~~ is an important adaptive device. It allows animals to immediately recognize the matter which is very useful seeing as the matter is the only source of food and ~~protection~~ protection until it matures.

subsequently. Without imagining, it would be difficult for the children to know how or from whom to receive food. Since there was no other way to determine who their mother is.

The adaptive qualities of displaced aggression are very useful. The ability to "take it out" on something other than the target of your anger is very useful, especially if the target is more powerful than yourself. In that case, it can be ~~was~~ thought of as even life-saving. It also helps us reduce stress, by taking out our aggression on an inanimate object, therefore helping ourselves feel better and protecting others from our aggression.

Finally, the loss of ~~was~~ information from short-term memory can be considered ~~was~~ adaptive. If we did not lose information, it would all go ~~into~~ to long term memory. This is not desirable because many things stored in short term memory are trivial or useless. Therefore, it is easier to release what we ~~are~~ wish to remember than to have our mind cluttered with useless bits of information.

The concept of behaviour being adaptive is not a new one; it has existed in biology for hundreds of years. To put it simply, it means that certain behaviours or body functions exist because they help the creature survive. In biology this concept is applied to the different structures of organisms but in biology it is used to explain how we act in a survival context.

Repression, the unconscious forgetting of painful events, could be adaptive by allowing us to live our lives without dwelling on past bad experiences. Without repression, you would remember your most painful past events, which would not allow you to function normally due to the depression and anxiety they may cause. Without repression, basically bad experiences would stay at the surface, creating tension that could disrupt our lives. Getting rid of this tension is the adaptive quality of repression.

Becoming part of the group, and doing what they do, and acting how they want you to act is called conforming. Conformity can be considered adaptive for many reasons. First, for protection. If you conform you are most likely to be accepted by a group, and if you are part of the group you are more protected from the outside environment. Also, conforming allows you to get accepted, which is also emotionally good for you. Feelings of acceptance and a high self-esteem can be gained by conforming to what a group wants you to do, because normally you would gain praise for it.

Imprinting, the taking on the first seen moving object as "mother" is an important adaptive device. It allows lower animals to immediately recognize its mother, which is very useful seeing as the mother is its only source of food and protection until it matures sufficiently. Without imprinting, it would be difficult for the children to know how or from whom to receive food, since they have no other way to determine who their mother is.

The adaptive qualities of displaced aggression are very useful. The ability to "take it out" on something other than the target of your anger is very useful, especially if the target is more powerful than yourself. In that case, it can be thought of as even life-saving. It also helps us relieve stress, by taking out our aggression on an inanimate object, therefore helping ourselves feel better, and protecting others from our aggression.

Finally, the loss of information from short-term memory can be considered adaptive. If we did not lose information, it would all go to long term memory. This is not desirable because many things stored in short term memory are trivial or useless. Therefore, it is easier to rehearse what we wish to remember than to have our mind cluttered with useless bits of information.

Comment: This essay, which earned 11 points, clearly explains the generalization "behavior is adaptive" with the statement, "certain behaviors or body functions exist because they help the creature survive." Repression is identified as "unconscious forgetting of painful thoughts." The definition could have been improved if the student had specified that these thoughts were put into the unconscious. The adaptive function of repression is explained in several ways, but most clearly by the statement that without repression "you would remember your most painful past events, which would not allow you to function normally due to the depression and anxiety they may cause." Conformity is clearly defined and, again, the student provides several cogent examples of its adaptive function. Imprinting is defined. The definition could have been improved by specifying that this occurs during a "critical" period. The student's description of the "survival" value of attachment to the mother is a nice illustration of imprinting's adaptive function. The student points out that if there were no loss of information from short-term memory, then such information would go to long-term memory and much of such information would be trivia. The statement that the result would "have our mind cluttered with useless bits of information" demonstrates an understanding of the adaptive function of this phenomenon.

Student Response 2 (Good)

One of the most useful generalizations in psychology is that "behavior is adaptive." The reason this theory is so common is people cope daily with all sorts of traumas, fears, and other events in their lives.

Repression is a type of defense mechanism often developed by abused and mentally harmed people. Repression allows an individual to forget or hide the memories of a traumatic experience. By utilizing repression to continue with life, a person adapts to living with pain and anguish.

When humans are in a group, they tend to follow along with what "everyone else is doing." As Asch's experiments proved, people conform because it is easier than not. A person's behavior, even morals and ethics, can be altered, or rather adapted, to deal with peer pressure or stress.

At birth, a special bond is formed between mother and baby known as imprinting. Because a baby is so helpless and dependent, it ~~adapt~~ attaches to his mother. The baby learns that it must have its mother to survive, so it adapts for necessity.

Anger causes people to act in ways not common to the norm. An angry person may decide to take out ~~his~~ his aggressions on something positive, or ^{at} something other than what the anger is actually targeted. This is known as displaced aggression. Because of a human's ability for reason and emotion, ~~a person can decide to~~ ~~outward~~ ~~the~~ ~~changes~~ ~~decrease~~ ~~something~~, a person's behavior can be changed or adapted.

A final way our behavior copes with life - adapts - is by losing information from ~~our~~ short-term memory. If a human brain constantly stored information without relief or breaks, we would be on the constant verge of a mental breakdown.

Humans have adapted to numerous behavioral mechanisms to help maintain health and sanity. Repression, conformity, and imprinting are simply a few of the multitude of methods.

Comment: The essay does not receive credit for explaining the generalization "behavior is adaptive." It is true that the ability to cope is adaptive. However, the student fails to generalize beyond that point to the more abstract generalization that such behavior persists in a specie's repertoire because it makes it more successful and able to survive.

The student never identifies or defines repression, but does explain its adaptive function with the sentence, "By utilizing repression to continue with life, a person adapts to living with pain and anguish." Conformity is explained and a reluctant point is given for its adaptive function. The point was awarded for the phrases "people conform because it is easier than not" and "to deal with peer pressure." A higher level answer would have taken a more abstract stance and pointed out the adaptive significance of maintaining group membership. The student does a nice job of explaining imprinting and stating its adaptive function. The student's answer could have been improved if he or she had pointed out that imprinting occurs during a critical period of development or that it occurs in newborns. The student gives a good description of displaced aggression but is unable to explain how the defense mechanism is adaptive. The student does not demonstrate knowledge of short-term memory but is able to make a reasonable statement of the adaptive function of loss of information from short-term memory. Overall, the essay earned 7 points.

Chapter IV

Statistical Information

SECTION II SCORES

Table 4.1 shows the score distribution for the free-response section of the 1994 AP Psychology Examination. Question 1 was scored on a 10-point scale, and Question 2 used an 11-point scale. Question 1 had the

higher Mean as Percent of Maximum, indicating that the score earned by this question's typical student was closer to the question's highest score than for Question 2. On the other hand, Question 2 had the greater Standard Deviation, indicating that the scores tended to be spread out more than for Question 1.

Table 4.1 — Section II Scores

Score	Question 1		Question 2	
	No. of Students (10*)	% Below Score	No. of Students (11*)	% Below Score
11			53	99.4
10	165	98.1	97	98.3
9	578	91.6	199	96.0
8	1,095	79.2	357	92.0
7	1,404	63.3	568	85.6
6	1,533	45.9	869	75.7
5	1,402	30.0	1,067	63.6
4	1,142	17.1	1,362	48.2
3	725	8.9	1,340	33.0
2	462	3.7	1,266	18.7
1	176	1.7	1,005	7.3
0	83	0.0	55	0.0
NR	65	0.0	92	0.0
Total Candidates	8,830		8,830	
Standard Deviation	2.18		2.43	
Mean	5.60		3.82	
Mean as % of Max. Possible Score	56		35	

* Maximum possible score

■ HOW THE AP GRADES IN PSYCHOLOGY WERE DETERMINED

Possible raw scores for the AP Psychology Examination ranged from 0 to 98 for Section I, and from 0 to 21 for Section II. However, scores are not reported to candidates, their schools, or colleges. They are converted to grades on a 5-point scale ranging from 1 to 5, and it is the grades that are reported.

AP grades for the 1994 Psychology Examination were calculated on the basis of a formula that deducted 1/4 point for each incorrect Section I answer and weighted the sections so that the multiple-choice

section contributed twice as much to the maximum composite score as did the free-response section. The Scoring Worksheet (Table 4.2) details the process of converting AP scores to composite scores and then to grades for the 1994 AP Psychology Examination.

The AP Psychology Development Committee, in consultation with experts from ETS and the College Board, determines the formula that will be used to produce the composite scores that are the basis for AP grades. The chief faculty consultant sets the four cut points that divide the composite scores into groups, each corresponding to a different grade.

Table 4.2 — Scoring Worksheet

Section I: Multiple-Choice:

$$\frac{\text{Number correct}}{\text{Number wrong}} - \left(\frac{1}{4} \times \frac{\text{Number wrong}}{\text{Number wrong}} \right) = \frac{\text{Multiple-Choice Score}}{\text{(If less than zero, enter zero.)}}$$

Section II: Free-Response:

$$\left(1.05 \times \frac{\text{Question 1 (out of 10)}}{\text{Question 1 (out of 10)}} \right) + \left(.9545 \times \frac{\text{Question 2 (out of 11)}}{\text{Question 2 (out of 11)}} \right) = \frac{\text{Free-Response Score}}{\text{Free-Response Score}}$$

Composite Score:

$$1.0204 \times \frac{\text{Multiple-Choice Score}}{\text{Multiple-Choice Score}} = \frac{\text{Weighted Section I Score (Do not round.)}}{\text{Weighted Section I Score (Do not round.)}}$$

$$2.3810 \times \frac{\text{Free-Response Score}}{\text{Free-Response Score}} = \frac{\text{Weighted Section II Score (Do not round.)}}{\text{Weighted Section II Score (Do not round.)}}$$

$$\frac{\text{Weighted Section I Score}}{\text{Weighted Section I Score}} + \frac{\text{Weighted Section II Score}}{\text{Weighted Section II Score}} = \frac{\text{Composite Score}}{\text{Composite Score}}$$

AP Grade:

Composite Score

105 – 150
88 – 104
71 – 87
52 – 70
0 – 51

AP Grade

5 (extremely well qualified)
4 (well qualified)
3 (qualified)
2 (possibly qualified)
1 (no recommendation)

A variety of information is available to help the chief faculty consultant determine the score ranges into which the exams should fall. Computer printouts provide complete distributions of scores on each portion of the multiple-choice and free-response sections of the examination, along with totals for each section and the composite score total.

With these tables and special statistical tables presenting score distributions from previous years, the chief faculty consultant can compare the examination at hand to results of other years. Assessments are also made of the examination itself, and of the reliability of the scoring. Finally, for each composite score, a computer roster summarizes student performance on all sections of the exam. On the basis of professional judgment regarding the quality of performance represented by the achieved scores, the chief faculty consultant determines the candidates' final AP grades. The grade distributions for the 1994 AP Psychology Examination are shown in Table 4.3, right.

Table 4.3 — Grade Distributions

Examination Grade	Number of Students	Percent at Grade
5	1,758	19.9
4	2,204	25.0
3	2,196	24.9
2	1,682	19.0
1	990	11.2
Total Number of Students		8,830
Mean Grade		3.23
Standard Deviation		1.28

It is interesting to note that almost 70 percent of the 1994 Psychology candidates earned an AP grade of at least 3, qualifying them for credit or advanced placement at most colleges and universities that give credit for AP grades.

■ SECTION I SCORES AND AP GRADES

Section I scores can be used to predict final AP grades. If students know their multiple-choice score, they can estimate their chances of having obtained a particular grade on the AP Examination. Table 4.4 gives the

numbers and probabilities of receiving a particular grade on the 1994 AP Psychology Examination given a range of scores on Section I.

Table 4.4 Section I Scores and AP Grades

Number of candidates within each multiple-choice score range who achieved a given grade
Probability that any candidate in a given multiple-choice score range would achieve a given grade on the 1994 AP Psychology Examination

Multiple-Choice Score	AP Grade					Row Total
	1	2	3	4	5	
75-98	0 0.0%	0 0.0%	6 0.3%	301 17.3%	1,428 82.3%	1,735 (19.6%)
63-74	0 0.0%	0 0.0%	376 16.6%	1,554 68.8%	329 14.6%	2,259 (25.6%)
51-62	0 0.0%	323 14.8%	1,509 69.2%	348 16.0%	1 0.0%	2,181 (24.7%)
38-50	172 10.6%	1,145 70.5%	305 18.8%	1 0.1%	0 0.0%	1,623 (18.4%)
0-37	818 79.3%	214 20.7%	0 0.0%	0 0.0%	0 0.0%	1,032 (11.7%)
Column Total	990 (11.2%)	1,682 (19.0%)	2,196 (24.9%)	2,204 (25.0%)	1,758 (19.9%)	8,830 (100.0%)

■ RELIABILITY OF CLASSIFICATION

The classification reliability of AP grades can be examined by using a statistical technique that makes it possible to estimate the consistency and accuracy of decisions based on those grades. The *consistency* of the decisions is the extent to which they would agree with the decisions that would have been made if the candidates had taken a different form of the AP Psychology Exam, equal in difficulty and covering the

same content as the form they actually took. The *accuracy* of the decisions is the extent to which they would agree with the decisions that would be made if each candidate could somehow be tested with all possible forms of the exam.

Table 4.5 shows the decision consistency and accuracy of the 1994 AP Psychology Examination. Each percentage in the table indicates the estimated proportion of candidates who would be consistently classified as either above or below the 2 to 3 or the 3 to 4 grade boundaries.

Table 4.5 — Estimated Consistency and Accuracy of Decisions Based on AP Grades for the 1994 AP Psychology Examination

Estimated Percentage of Candidates Who Would Be Reclassified the Same Way on the Basis of:			
Another Form		Average of All Forms	
2-3 boundary	3-4 boundary	2-3 boundary	3-4 boundary
88%	85%	91%	89%

The percentages in the table are estimates — candidates rarely take more than one form of the exam — and are based on data from a representative sample of the standard group of candidates who took the 1994 AP Psychology Exam.

■ COLLEGE COMPARABILITY STUDIES

The Advanced Placement Program has conducted college grade comparability studies in various AP Examination subjects. These studies have compared the performance of AP Exam candidates with that of college students in related courses who have taken the AP Exam at the end of their course. In general, these studies indicate that AP grades of 5 and 4 are comparable to a college course grade of A, while at some institutions, an AP grade of 4 is comparable to a college course grade of B. An AP grade of 3 is approximately equal to a college course grade of B at many institutions, while at others, it is more nearly comparable to a college course grade of C.

Other studies conducted by colleges and universities indicate that AP students generally receive higher grades in advanced courses than do the students who have taken the regular freshman-level courses at the

institution. Each college is encouraged to undertake such studies in order to establish appropriate policy for the acceptance of AP grades. Data for these studies are readily available as large percentages of AP students successfully handle the associated course work. Some institutions have found that until these studies are undertaken, placing students into advanced classes but allowing them to transfer to a lower-level course if necessary is a desirable educational strategy.

■ REMINDERS FOR SECONDARY SCHOOL TEACHERS

AP Examinations are designed to provide accurate assessments of achievement. However, any examination has limitations, especially when used for purposes other than those intended. Presented here are some suggestions for teachers to aid in the use and interpretation of AP grades.

■ AP Examinations are developed and evaluated independently of each other. They are linked only by common purpose, format, and method of reporting results. Therefore, comparisons should not be made between grades on different AP Examinations. An AP grade in one subject may not have the same meaning

as the same AP grade in another subject, just as national and college standards vary from one discipline to another.

■ AP grades are not exactly comparable to college course grades. The AP Program conducts research studies every few years in each AP subject to ensure that the AP grading standards are comparable to those used in colleges with similar courses. In general, these studies indicate that an AP grade of 3 is approximately equal to a college course grade of B at many institutions. At some other institutions, an AP grade of 3 is more nearly comparable to a college course grade of C. These are only generalizations, however. The degree of comparability of an AP grade to a college course grade depends to a large extent on the particular college course used for comparison.

■ The confidentiality of candidate grade reports should be recognized and maintained. All individuals who have access to AP grades should be aware of the confidential nature of the grades and agree to maintain their security. In addition, school districts and states should not release data about high school performance without the school's permission.

■ AP Examinations are not designed as instruments for teacher or school evaluation. A large number of factors influence AP Exam performance in a particular course or school in any given year. As a result, differences in AP Exam performance should be carefully studied before being attributed to the teacher or school.

■ Where evaluation of AP students, teachers, or courses is desired, local evaluation models should be developed. An important aspect of any evaluation model is the use of an appropriate method of comparison or frame of reference to account for yearly changes in student composition and ability, as well as local differences in resources, educational methods, and socioeconomic factors.

■ The "Report to AP Teachers" can be a useful diagnostic tool in reviewing course results. The report identifies areas of strength and weakness for each AP course. This information may also help to guide your students in identifying their own strengths and weaknesses in preparation for future study.

■ Many factors can influence course results. AP Exam performance may be due to the degree of agreement between your course and the course defined in the relevant AP Course Description, use of different instructional methods, differences in emphasis or

preparation on particular parts of the examination, differences in pre-AP curriculum, or differences in student background and preparation in comparison with the national group.

■ REPORTS ON AP GRADES

The results of AP Examinations are disseminated in several ways to candidates, their secondary schools, and the colleges they select.

■ College and candidate grade reports contain a cumulative record of all grades earned by the candidate on AP Exams during the current or previous years. These reports are sent in early July. (School grade reports are sent shortly thereafter.)

■ Group results for AP Examinations are available to AP teachers whenever five or more candidates at a school have taken a particular AP Examination.

■ The "Report to AP Teachers" provides useful information comparing local candidate performance with that of the total group of candidates taking an exam, as well as details on different subsections of the examination.

Several other reports produced by the AP Program provide summary information on AP Examinations.

■ State and National Reports show the distribution of grades obtained on each AP Exam for all candidates and for subsets of candidates broken down by sex and by ethnic group.

■ The Program also produces a one-page summary of AP grade distributions for all exams in a given year.

For information on any of the above, please call AP Services at (609) 771-7300.

■ PURPOSE OF AP GRADES

AP grades are intended to allow participating colleges and universities to award college credit, advanced placement, or both to qualified students. In general, an AP grade of 3 or higher indicates sufficient mastery of course content to allow placement in the succeeding college course, or credit for and exemption from a college course comparable to the AP course. Credit and placement policies are determined by each college or university, however, and students should be urged to contact their colleges directly to ask for specific Advanced Placement policies in writing.

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For questions, please call AP Order Fulfillment at (609) 771-7243. Return this form to Advanced Placement Program, Dept. E-22, P.O. Box 6670, Princeton, NJ 08541-6670.

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	201659	<i>1995, 1996 Advanced Placement Course Description in Psychology</i>	\$8	
	255147	Set of free-response questions used in recent years	\$3	
	208978	<i>Teacher's Guide to the AP Course in Psychology</i>	\$10	
	255153	<i>The 1994 AP Psychology Free-Response Guide with Multiple-Choice Section</i>	\$18	
	254346	The above examination only (packets of 10)	\$20	

Orders delivered to locations within Canada must add the 7% GST (GST registration number: 131414468).

Orders delivered to locations within California must include the 8.25% sales tax.

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THE COLLEGE BOARD



Advanced Placement Examination

MACROECONOMICS

1995

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A. SECURITY LINE

To maintain the security of the exam and the validity of my AP grade, I will allow no one other than myself to see the multiple-choice questions and will seal the appropriate section when asked to do so. In addition, I am aware of and agree to the Program's policies and procedures as outlined in the 1995 AP Bulletin for Students and Parents.

ETS U
ONLY

[illegible]

126	A	B	C	D	E
127	A	B	C	D	E
128	A	B	C	D	E
129	A	B	C	D	E
130	A	B	C	D	E
131	A	B	C	D	E
132	A	B	C	D	E
133	A	B	C	D	E
134	A	B	C	D	E
135	A	B	C	D	E


ETS USE ONLY		1	2
Exam	1	2	

9	8	7	6	5	4	3	2	1	0
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101	A	B	C	D	E
102	A	B	C	D	E
103	A	B	C	D	E
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75	A	B	C	D	E

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23	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
24	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
25	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

 Advanced Placement Program®
THE COLLEGE BOARD
Master ID/Answer Sheet (MIDAS) for May 1995 Form 3RBP

USING THE ABBREVIATIONS GIVEN IN YOUR CANDIDATE PACK. FILL ADDRESS

MACROECONOMICS

Two hours are allotted for this examination: 1 hour and 10 minutes for Section I, which consists of multiple-choice questions; and 50 minutes for Section II, which consists of three mandatory essay questions. Section I is printed in this examination booklet. Section II is printed in a separate booklet.

SECTION I

Time—1 hour and 10 minutes

Number of questions—60

Percent of total grade—66 $\frac{2}{3}$

Section I of this examination contains 60 multiple-choice questions. Therefore, please be careful to fill in only the ovals that are preceded by numbers 1 to 60 on your answer sheet.

General Instructions

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE INSTRUCTED TO DO SO.

INDICATE ALL YOUR ANSWERS TO QUESTIONS IN SECTION I ON THE SEPARATE ANSWER SHEET. No credit will be given for anything written in this examination booklet, but you may use the booklet for notes or scratchwork. After you have decided which of the suggested answers is best, COMPLETELY fill in the corresponding oval on the answer sheet. Give only one answer to each question. If you change an answer, be sure that the previous mark is erased completely.

Example:

Chicago is a
(A) state
(B) city
(C) country
(D) continent
(E) village

Sample Answer

(A) ● (C) (D) (E)

Many candidates wonder whether or not to guess the answers to questions about which they are not certain. In this section of the examination, as a correction for haphazard guessing, one-fourth of the number of questions you answer incorrectly will be subtracted from the number of questions you answer correctly. It is improbable, therefore, that mere guessing will improve your score significantly; it may even lower your score, and it does take time. If, however, you are not sure of the correct answer but have some knowledge of the question and are able to eliminate one or more of the answer choices as wrong, your chance of getting the right answer is improved, and it may be to your advantage to answer such a question.

Use your time effectively, working as rapidly as you can without losing accuracy. Do not spend too much time on questions that are too difficult. Go on to other questions and come back to the difficult ones later if you have time. It is not expected that everyone will be able to answer all the multiple-choice questions.

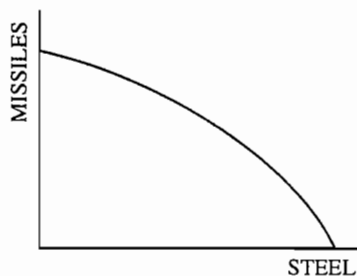
MACROECONOMICS

SECTION I

Time — 70 minutes

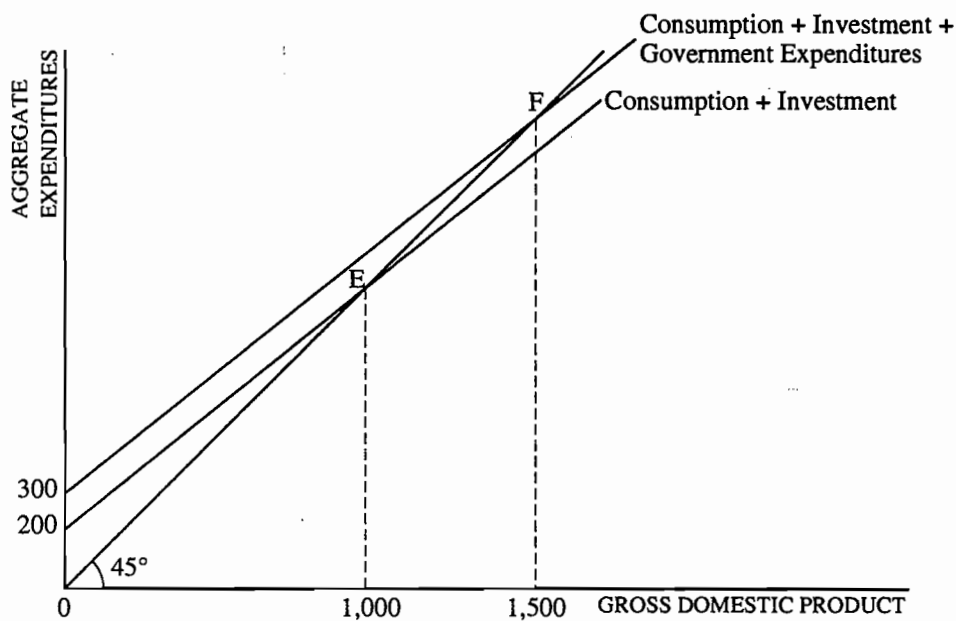
60 Questions

Directions: Each of the questions or incomplete statements below is followed by five suggested answers or completions. Select the one that is best in each case and then fill in the corresponding oval on the answer sheet.



- Which of the following would cause the production possibilities curve shown above to shift outward?
 - Reopening steel plants that had been closed
 - Rehiring laid-off steelworkers
 - Using machinery for missile production instead of steel production
 - Using machinery for steel production instead of missile production
 - Developing a more efficient steelmaking process
- If in a specified year nominal gross domestic product grew by 11 percent and real gross domestic product grew by 4 percent, inflation for this year would be
 - 7%
 - 7%
 - 8%
 - 11%
 - 15%
- Which of the following is an example of structural unemployment?
 - A computer programmer who leaves her job to move to Florida
 - A worker who loses his job during a recession
 - An autoworker who is replaced by a robot
 - A construction worker who is always unemployed during the winter months
 - A worker who is engaged in unproductive work
- What would be the effect of a large increase in labor productivity on the real gross domestic product and the price level?

	Real Gross Domestic Product	Price Level
(A)	Increase	Increase
(B)	Increase	Decrease
(C)	No effect	Increase
(D)	Decrease	Increase
(E)	Decrease	Decrease
- An increase in which of the following will increase the value of the spending multiplier?
 - The supply of money
 - Equilibrium output
 - Personal income tax rates
 - The marginal propensity to consume
 - The required reserve ratio
- According to the Keynesian model, which of the following would increase aggregate demand?
 - An increase in autonomous investment
 - An increase in the discount rate
 - A decrease in unemployment compensation payments
 - A decrease in government expenditures accompanied by an equal reduction in taxes
 - A decrease in government expenditures on public works



7. The graph above indicates equilibrium at E for a closed economy without government spending. If the addition of government spending results in equilibrium at F, which of the following is true?
- (A) Government spending is \$300 and the multiplier is 5.
 - (B) Government spending is \$100 and the multiplier is 5.
 - (C) Government spending is \$100 and consumption increases by \$500.
 - (D) Government spending and gross domestic product increase by \$500 each.
 - (E) Consumption and gross domestic product increase by \$500 each.

8. Commercial banks can create money by
- (A) transferring depositors' accounts at the Federal Reserve for conversion to cash
 - (B) buying Treasury bills from the Federal Reserve
 - (C) sending vault cash to the Federal Reserve
 - (D) maintaining a 100 percent reserve requirement
 - (E) lending excess reserves to customers
9. If the reserve requirement is 20 percent, the existence of \$100 worth of excess reserves in the banking system can lead to a maximum expansion of the money supply equal to
- (A) \$20
 - (B) \$100
 - (C) \$300
 - (D) \$500
 - (E) \$750
10. If the Federal Reserve lowers the reserve requirement, which of the following would most likely occur?
- (A) Imports will rise, decreasing the trade deficit.
 - (B) The rate of saving will increase.
 - (C) Unemployment and inflation will both increase.
 - (D) Businesses will purchase more factories and equipment.
 - (E) The budget deficit will increase.
11. If the public's desire to hold money as currency increases, what will the impact be on the banking system?
- (A) Banks would be more able to reduce unemployment.
 - (B) Banks would be more able to decrease aggregate supply.
 - (C) Banks would be less able to decrease aggregate supply.
 - (D) Banks would be more able to expand credit.
 - (E) Banks would be less able to expand credit.

12. According to Keynesian theory, decreasing taxes and increasing government spending will most likely change consumption expenditures and unemployment in which of the following ways?

<u>Consumption Expenditures</u>	<u>Unemployment</u>
(A) Decrease	Increase
(B) Decrease	No change
(C) Increase	Decrease
(D) Increase	Increase
(E) No change	Decrease

13. Which of the following policy combinations is most likely to cure a severe recession?

<u>Open-Market Operations</u>	<u>Taxes</u>	<u>Government Spending</u>
(A) Buy securities	Increase	Decrease
(B) Buy securities	Decrease	Increase
(C) Buy securities	Decrease	Decrease
(D) Sell securities	Decrease	Decrease
(E) Sell securities	Increase	Increase

14. In an economy at full employment, a presidential candidate proposes cutting the government debt in half in four years by increasing income tax rates and reducing government expenditures. According to Keynesian theory, implementation of these policies is most likely to increase

(A) unemployment
(B) consumer prices
(C) aggregate demand
(D) aggregate supply
(E) the rate of economic growth

15. To protect high-cost domestic producers, a country imposes a tariff on an imported commodity, Y. Which of the following is most likely to occur in the short run?

I. A decrease in domestic production of Y
II. An increase in domestic production of Y
III. An increase in foreign output of Y

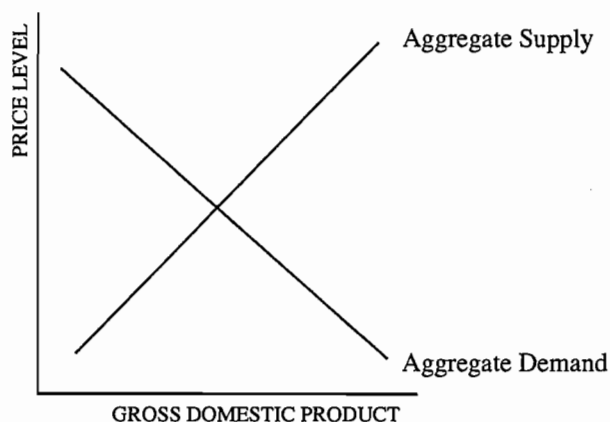
(A) I only
(B) II only
(C) III only
(D) I and III only
(E) II and III only

16. Suppose two countries are each capable of individually producing two given commodities. Instead, each specializes by producing the commodity for which it has a comparative advantage and then trades with the other country. Which of the following is most likely to result?

(A) The two countries will become more independent of each other.
(B) Unemployment will increase in one country and decrease in the other.
(C) There will be more efficient production in one country but less efficient production in the other.
(D) Both countries will become better off.
(E) Both countries will be producing their commodity inefficiently.

17. Which of the following means of reducing military spending would have the greatest positive impact on gross domestic product for the United States?

(A) Combining two domestic military bases into one overseas base
(B) Cutting retirement benefits to military personnel
(C) Closing overseas military bases and relocating those operations to the United States
(D) Closing overseas military bases and laying off military personnel
(E) Canceling contracts with domestic producers for new airplanes



18. According to the graph above, which of the following will necessarily result in a decrease in output?

I. A rightward shift of the aggregate demand curve
II. A leftward shift of the aggregate demand curve
III. A rightward shift of the aggregate supply curve
IV. A leftward shift of the aggregate supply curve

(A) I only
(B) III only
(C) I and III only
(D) II and III only
(E) II and IV only

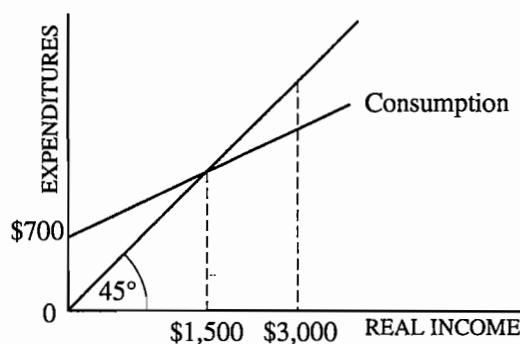
19. Which of the following will result in the greatest increase in aggregate demand?

- (A) A \$100 increase in taxes
- (B) A \$100 decrease in taxes
- (C) A \$100 increase in government expenditures
- (D) A \$100 increase in government expenditures, coupled with a \$100 increase in taxes
- (E) A \$100 increase in government expenditures, coupled with a \$100 decrease in taxes

20. If the economy is in a severe recession, which of the following is the fiscal policy most effective in stimulating production?

- (A) Government spending increases.
- (B) Government spending decreases.
- (C) Personal income taxes are increased.
- (D) The Federal Reserve sells bonds on the open market.
- (E) The Federal Reserve buys bonds on the open market.

Questions 21-22 refer to the diagram below, which depicts an economy's consumption function.



21. If the marginal propensity to consume increases, the equilibrium levels of income and consumption will change in which of the following ways?

<u>Equilibrium Level of Income</u>	<u>Equilibrium Level of Consumption</u>
(A) No change	No change
(B) No change	Increase
(C) Increase	No change
(D) Increase	Increase
(E) Decrease	Decrease

22. If private investment of \$100 is added to the economy, the equilibrium levels of income and consumption will change in which of the following ways?

<u>Equilibrium Level of Income</u>	<u>Equilibrium Level of Consumption</u>
(A) Increase	Decrease
(B) Increase	Increase
(C) Increase	No change
(D) No change	Increase
(E) No change	No change

23. The real value of the United States dollar is determined by
- (A) federal regulations regarding purchasing power
 - (B) the value of the gold backing the dollar
 - (C) the goods and services it will buy
 - (D) the money multiplier
 - (E) the marginal propensity to consume
24. The demand for money increases when national income increases because
- (A) spending on goods and services increases
 - (B) interest rates increase
 - (C) the budget deficit increases
 - (D) the money supply increases
 - (E) the public becomes more optimistic about the future
25. An aggregate supply curve may be horizontal over some range because within that range
- (A) a higher price level leads to higher interest rates, which reduce the money supply and consumer spending
 - (B) changes in the aggregate price level do not induce substitution
 - (C) output cannot be increased unless prices and interest rates increase
 - (D) rigid prices prevent employment from fluctuating
 - (E) resources are underemployed and an increase in demand will be satisfied without any pressure on the price level
26. If the Federal Reserve wishes to use monetary policy to reinforce Congress' fiscal policy changes, it should
- (A) increase the money supply when government spending is increased
 - (B) increase the money supply when government spending is decreased
 - (C) decrease the money supply when government spending is increased
 - (D) increase interest rates when government spending is increased
 - (E) decrease interest rates when government spending is decreased
27. Which of the following relationships is illustrated by a short-run Phillips curve?
- (A) A decrease in the rate of inflation is accompanied by an increase in the rate of economic growth.
 - (B) A decrease in the rate of inflation is accompanied by an increase in the rate of unemployment.
 - (C) An increase in the rate of inflation is accompanied by a decrease in the rate of economic growth.
 - (D) An increase in the rate of inflation is accompanied by an increase in the rate of unemployment.
 - (E) A decrease in the rate of economic growth is accompanied by a decrease in the rate of unemployment.
28. Which of the following could cause simultaneous increases in inflation and unemployment?
- (A) A decrease in government spending
 - (B) A decrease in the money supply
 - (C) A decrease in the velocity of money
 - (D) An increase in inflationary expectations
 - (E) An increase in the overall level of productivity
29. If other things are held constant, an increase in United States imports will
- (A) tend to cause the dollar to appreciate because the world supply of dollars will rise
 - (B) tend to cause the dollar to appreciate because the world demand for dollars will rise
 - (C) have no effect on the exchange rate for the dollar because exports will also increase
 - (D) tend to cause the dollar to depreciate because the world supply of dollars will rise
 - (E) tend to cause the dollar to depreciate because the world demand for dollars will rise

30. An increase in which of the following is most likely to cause an improvement in the standard of living over time?
- (A) Size of the population
 - (B) Size of the labor force
 - (C) Number of banks
 - (D) Level of taxation
 - (E) Productivity of labor
31. The long-run aggregate supply curve is likely to shift to the right when there is
- (A) an increase in the cost of productive resources
 - (B) an increase in productivity
 - (C) an increase in the federal budget deficit
 - (D) a decrease in the money supply
 - (E) a decrease in the labor force
32. The consumer price index measures which of the following?
- (A) The change over time of the weighted prices of a particular group of goods and services
 - (B) The change over time of the weighted wholesale price index
 - (C) The change over time of the difference between the gross domestic product deflator and the wholesale price index
 - (D) Inflation corrected for changes in the real gross domestic product
 - (E) Inflation corrected for changes in the wholesale price index
33. Which of the following is true if the economy is producing at the full-employment level of output?
- (A) The unemployment rate is zero.
 - (B) No person is receiving unemployment compensation from the government.
 - (C) There is frictional unemployment.
 - (D) The government's budget is balanced.
 - (E) The balance of trade is in equilibrium.
34. Which of the following is a basic tenet of classical economic analysis?
- (A) Saving is usually greater than investment.
 - (B) The economy is self-correcting to full employment.
 - (C) The economy may be in equilibrium at less than full employment.
 - (D) Inflation is not a serious economic problem.
 - (E) The prices of products tend to be inflexible.
35. Which of the following will most likely result from a decrease in government spending?
- (A) An increase in output
 - (B) An increase in the price level
 - (C) An increase in employment
 - (D) A decrease in aggregate supply
 - (E) A decrease in aggregate demand
36. Current equilibrium output equals \$2,500,000, potential output equals \$2,600,000, and the marginal propensity to consume equals 0.75. Under these conditions, a Keynesian economist is most likely to recommend
- (A) decreasing taxes by \$25,000
 - (B) decreasing taxes by \$100,000
 - (C) increasing government spending by \$25,000
 - (D) increasing government spending by \$33,333
 - (E) increasing government spending by \$100,000
37. An inflationary gap could be reduced by
- (A) an increase in government spending
 - (B) an increase in the supply of money
 - (C) an increase in the income tax rate
 - (D) a decrease in the discount rate
 - (E) a decrease in the reserve requirement

38. The circular flow of economic activity between consumers and producers includes which of the following?
- I. Households buy factor services from firms.
 - II. Households sell factor services to firms.
 - III. Households buy outputs from firms.
 - IV. Households sell outputs to firms.
- (A) III only
(B) IV only
(C) I and II only
(D) II and III only
(E) III and IV only
39. Suppose the required reserve ratio is 20 percent and a single bank with no excess reserves receives a \$100 deposit from a new customer. The bank now has excess reserves equal to
- (A) \$20
(B) \$80
(C) \$100
(D) \$400
(E) \$500
40. Which of the following is most likely to increase if the public decides to increase its holdings of currency?
- (A) The interest rate
(B) The price level
(C) Disposable personal income
(D) Employment
(E) The reserve requirement
41. During a mild recession, if policymakers want to reduce unemployment by increasing investment, which of the following policies would be most appropriate?
- (A) Equal increases in government expenditure and taxes
(B) An increase in government expenditure only
(C) An increase in transfer payments
(D) An increase in the reserve requirement
(E) Purchase of government securities by the Federal Reserve

42. Which of the following monetary and fiscal policy combinations would most likely result in a decrease in aggregate demand?

	<u>Discount Rate</u>	<u>Open-Market Operations</u>	<u>Government Spending</u>
(A)	Lower	Buy bonds	Increase
(B)	Lower	Buy bonds	Decrease
(C)	Raise	Sell bonds	Increase
(D)	Raise	Buy bonds	Increase
(E)	Raise	Sell bonds	Decrease

43. Which of the following is true of supply shocks?

- (A) They tend to change both relative prices and the general price level in the economy.
- (B) They affect only the general price level.
- (C) They can be anticipated and offset with appropriate fiscal policy.
- (D) They can be anticipated and offset with appropriate monetary policy.
- (E) They make the aggregate supply curve vertical.

44. Suppose that, from 1985 to 1986, unemployment fell from 7.2 to 7.0 percent and inflation fell from 3.8 to 1.1 percent. An explanation of these changes might be that the

- (A) aggregate demand curve shifted to the left
- (B) aggregate demand curve shifted to the right
- (C) aggregate supply curve shifted to the left
- (D) aggregate supply curve shifted to the right
- (E) short-run Phillips curve shifted to the right

45. If higher United States interest rates cause foreign demand for the dollar to increase, which of the following will occur to the international value of the dollar and to United States exports?

<u>International Value of the Dollar</u>	<u>Exports</u>
(A) Increase	Increase
(B) Increase	Decrease
(C) Increase	No change
(D) Decrease	Increase
(E) Decrease	Decrease

46. The table below indicates the number of labor hours required in Countries X and Y to produce one unit of food or one unit of clothing.

<u>Country</u>	<u>Food</u>	<u>Clothing</u>
X	20 hours	50 hours
Y	10 hours	20 hours

Given this information, which of the following statements is correct?

- (A) X has a comparative advantage in the production of both food and clothing.
 (B) Y has a comparative advantage in the production of both food and clothing.
 (C) X has a comparative advantage in food production, whereas Y has a comparative advantage in clothing production.
 (D) Y has a comparative advantage in food production, whereas X has a comparative advantage in clothing production.
 (E) Neither country has a comparative advantage in the production of either good.
47. Which of the following groups of people would benefit from unanticipated inflation?

- I. Savers
 II. Borrowers
 III. Lenders

- (A) I only
 (B) II only
 (C) III only
 (D) I and II only
 (E) I and III only

48. An increase in the labor force participation rate will

- (A) increase investment and decrease savings
 (B) increase savings and decrease investment
 (C) have no effect on unemployment
 (D) make it easier to reduce unemployment
 (E) make it more difficult to reduce unemployment

49. Which of the following is a key feature of Keynesian economics?

- (A) The level of saving depends mostly on interest rates.
 (B) The level of government expenditure depends mostly on interest rates.
 (C) Supply creates its own demand.
 (D) Macroeconomic equilibrium can occur at less than full employment.
 (E) Wages are more flexible than prices.

50. If a large increase in total spending has no effect on real gross domestic product, it must be true that

- (A) the price level is rising
 (B) the economy is experiencing high unemployment
 (C) the spending multiplier is equal to 1
 (D) the economy is in short-run equilibrium
 (E) aggregate supply has increased

51. According to Keynesian theory, the most important determinant of saving and consumption is the

- (A) interest rate
 (B) price level
 (C) level of income
 (D) level of employment
 (E) flexibility of wages and prices

52. Under which of the following circumstances would increasing the money supply be most effective in increasing real gross domestic product?

<u>Interest Rates</u>	<u>Employment</u>	<u>Business Optimism</u>
(A) High	Full	High
(B) High	Less than full	High
(C) Low	Full	High
(D) Low	Full	Low
(E) Low	Less than full	Low

53. Faced with a large federal budget deficit, the government decides to decrease expenditures and tax revenues by the same amount. This action will affect output and interest rates in which of the following ways?

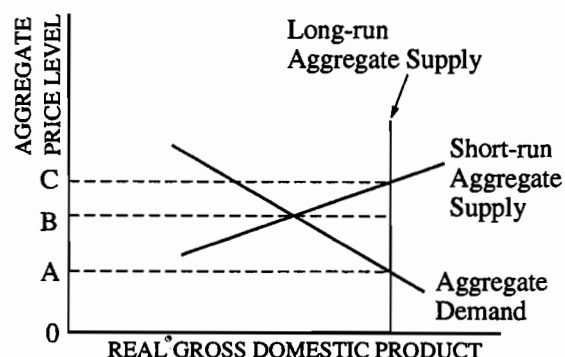
<u>Output</u>	<u>Interest Rates</u>
(A) Increase	Increase
(B) Increase	Decrease
(C) No change	Decrease
(D) Decrease	Increase
(E) Decrease	Decrease

54. If crowding out only partially offsets the effects of a tax cut, which of the following changes in interest rates and gross domestic product are most likely to occur?

<u>Interest Rates</u>	<u>Gross Domestic Product</u>
(A) Increase	Increase
(B) Increase	Remain unchanged
(C) Increase	Decrease
(D) Remain unchanged	Increase
(E) Decrease	Decrease

55. All of the following are components of the money supply in the United States EXCEPT

- (A) paper money
- (B) gold bullion
- (C) checkable deposits
- (D) coins
- (E) demand deposits



56. The graph above depicts an economy's aggregate demand and aggregate supply curves. If aggregate demand remains constant, the equilibrium price levels in the short run and in the long run will be which of the following?

<u>Short Run</u>	<u>Long Run</u>
(A) 0A	0A
(B) 0B	0A
(C) 0B	0C
(D) 0C	0A
(E) 0C	0C

57. According to both monetarists and Keynesians, which of the following happens when the Federal Reserve reduces the discount rate?

- (A) The demand for money decreases and market interest rates decrease.
- (B) The demand for money increases and market interest rates increase.
- (C) The supply of money increases and market interest rates decrease.
- (D) The supply of money increases and market interest rates increase.
- (E) Both the demand for money and the supply of money increase and market interest rates increase.

58. An increase in which of the following is most likely to increase the long-run growth rate of an economy's real per capita income?
- (A) Population growth
 - (B) The proportion of gross domestic product consumed
 - (C) The educational attainment of the population
 - (D) The supply of money in circulation
 - (E) Personal income taxes
59. An increase in the money supply will have the greatest effect on real gross domestic product if
- (A) the marginal propensity to consume is low
 - (B) unemployment is very low
 - (C) investment spending is not sensitive to changes in interest rates
 - (D) the quantity of money demanded is not very sensitive to interest rates
 - (E) the required reserve ratio is high
60. If the Federal Reserve undertakes a policy to reduce interest rates, international capital flows will be affected in which of the following ways?
- (A) Long-run capital outflows from the United States will decrease.
 - (B) Long-run capital inflows to the United States will increase.
 - (C) Short-run capital outflows from the United States will decrease.
 - (D) Short-run capital inflows to the United States will decrease.
 - (E) Short-run capital inflows to the United States will not change.

END OF SECTION I

MACROECONOMICS

SECTION II

1995

Time — 50 minutes

Directions: You have fifty minutes to answer all three of the following questions. It is suggested that you take a few minutes to plan and outline each answer. Spend approximately half your time on the first question and divide the remaining time equally between the next two questions. In answering the questions, you should emphasize the line of reasoning that generated your results; it is not enough to list the results of your analysis. Include diagrams, if useful, in explaining your answers. All diagrams should be clearly labeled.

1. Over the past two years, the unemployment rate in Country X has risen from 5 percent to 9 percent. As the leader of Country X, you have been presented with two policy options to address the unemployment problem.

Policy 1: Use tariffs and quotas to restrict imports and thus protect jobs in Country X.

Policy 2: Use monetary and fiscal policies to solve the unemployment problem without resorting to trade restrictions.

- (a) Explain two disadvantages of selecting Policy 1.
 - (b) Describe in detail one specific monetary policy action and one specific fiscal policy action you would take to reduce unemployment. Explain how each of these actions would affect each of the following in the short run.
 - (i) Aggregate demand
 - (ii) Output and the price level
 - (iii) Real interest rates
 - (c) If the interest rate effects you identified in Part (b) continue in the long run, explain the impact of these effects on economic growth.
2. Assume that the economy is in a recession.
- (a) Explain each of the following.
 - (i) Monetary and fiscal policies advocated by monetarists to eliminate the recession
 - (ii) Monetary and fiscal policies advocated by Keynesians to eliminate the recession
 - (b) Explain how monetarists and Keynesians differ in their conclusions about the effects of crowding out associated with the stabilization policies outlined in Part (a).
3. Explain how some individuals are helped and others harmed by unanticipated inflation as they participate in each of the following markets.
- (a) Credit markets
 - (b) Labor markets
 - (c) Product markets

END OF EXAMINATION

